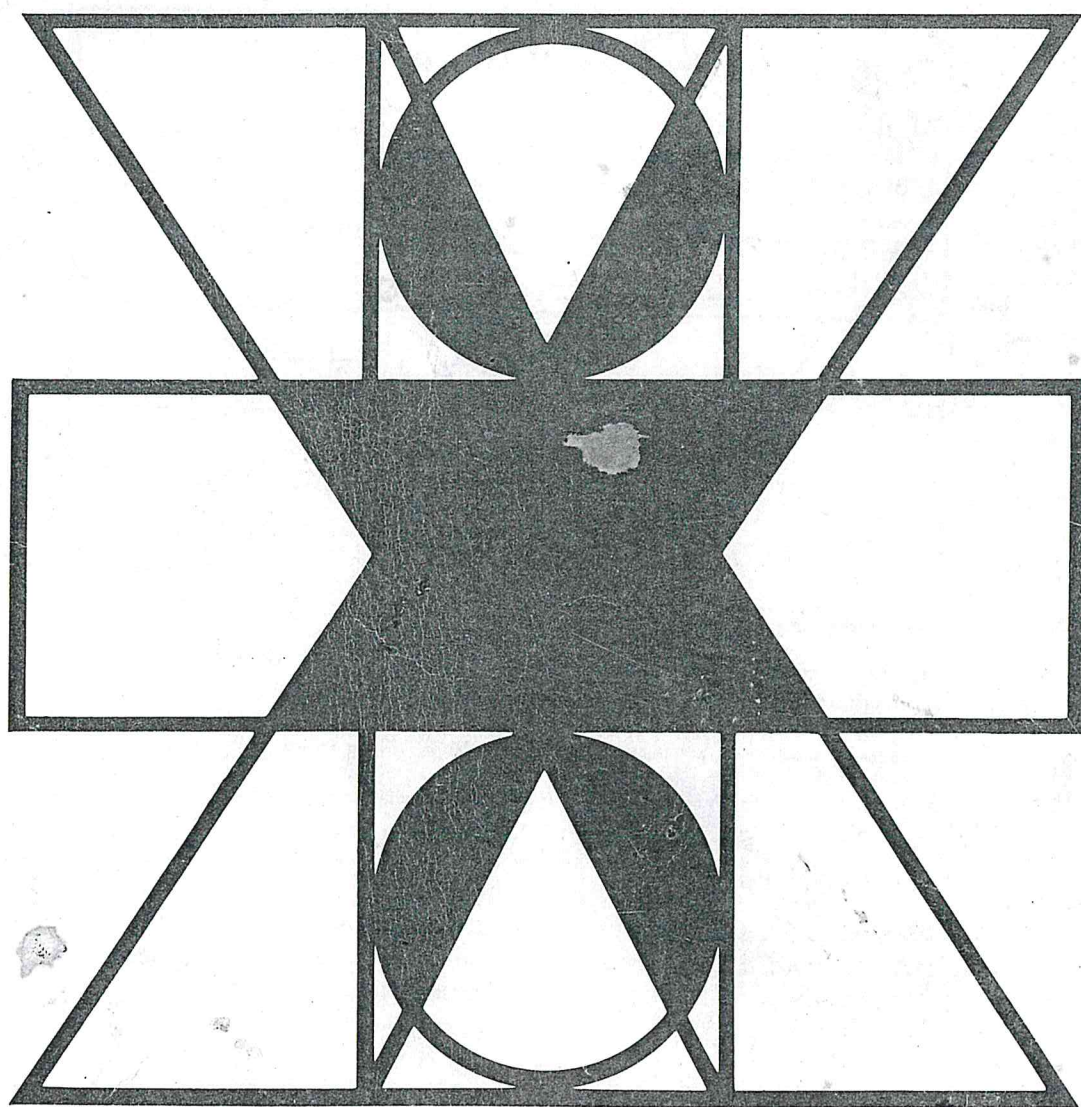
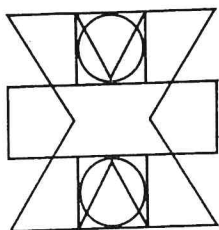


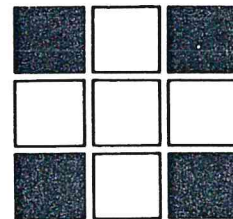
HOLT SCHOOL MATHEMATICS

WORKBOOK





HOLT SCHOOL MATHEMATICS WORKBOOK



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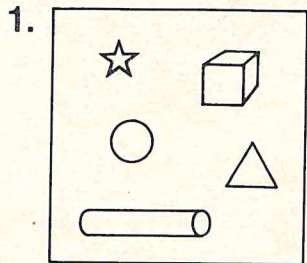
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ISBN: 0-03-006276-4

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vi ■ SETS

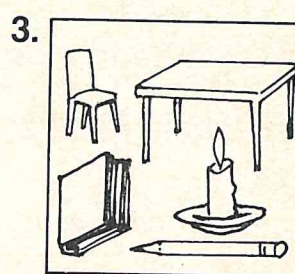
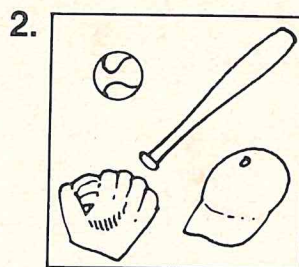
Name the members of each set.



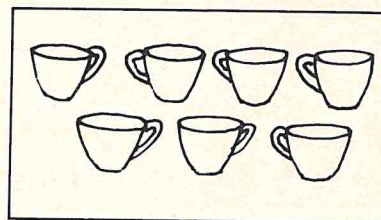
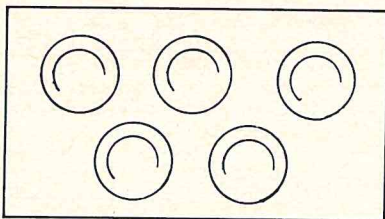
star, block,

triangle

circle, stick



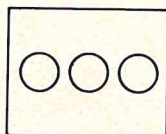
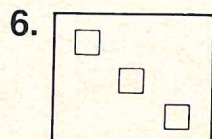
Look at the set of plates and the set of cups.



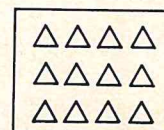
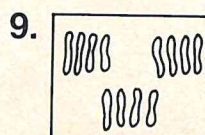
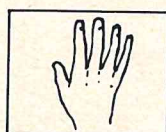
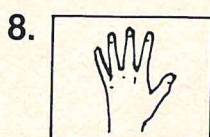
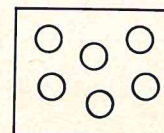
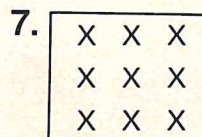
4. Which set has more members? _____

5. Which set has fewer members? _____

Write YES next to equivalent sets. Write NO next to sets that are not equivalent.



yes



2 ■ SETS OF NUMBERS

Here is the set of whole numbers.

$\{0, 1, 2, 3, 4, 5, 6, 7, 8, \dots\}$

1. What do the three dots mean? _____

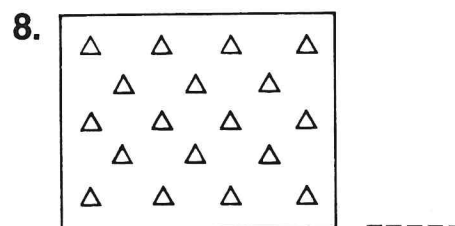
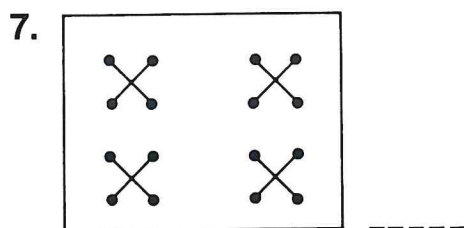
What whole number comes

2. after 4? _____ 3. after 7? _____ 4. before 5? _____

5. What are the first three whole numbers? _____

6. Is there a last counting number? _____

How many members are in each set?



9. What is the number of the set with no members? _____

10. What is the set with no members called? _____

Place a \checkmark after the sets with no members.

11. The set of five-headed dogs. ___ \checkmark ___

12. The set of boys in your class. _____

13. The set of live elephants in the gym. _____

14. The set of stripes on the flag. _____

15. The set of cats on the moon. _____

16. The set of chairs in your classroom. _____

4 ■ USING NUMBERS

Here is a list of the months of the year.

January, February, March, April, May, June, July
August, September, October, November, December

1. How many months are in the year? _____
2. How many months have names starting with the letter "J"? _____
3. How many months have names ending with the letter "r"? _____

July is the seventh month.

4. Which month is September? _____ *ninth* _____
5. Which month is October? _____
6. Which month is fourth? _____
7. Which month is eleventh? _____
8. Which month comes first? _____

Is the number used to tell "how many" or "which one"?

9. Paul has ten cents. _____ *how many* _____
10. Pat is in the fourth grade. _____
11. Janice is four feet tall. _____
12. Stephen read two chapters. _____
13. Mary read the first chapter. _____

7 ■ ROMAN NUMERALS

Here are some numerals the Romans used.

Roman Numerals	I	V	X	L	C
Our Numerals	1	5	10	50	100

Write our numerals.

1. VI 6

2. VIII

3. XV

4. LXV

5. LIII

6. LXXXVI

7. IX

8. XL

Write Roman numerals.

9. $367 = \underline{300} + \underline{60} + \underline{7}$

$= \underline{CCC} + \underline{LX} + \underline{VII}$

$= \underline{CCCLXVII}$

10. $125 = \underline{\quad\quad} + \underline{\quad\quad} + \underline{\quad\quad}$

$= \underline{\quad\quad} + \underline{\quad\quad} + \underline{\quad\quad}$

$= \underline{\quad\quad\quad\quad\quad\quad}$

11. $154 = \underline{\quad\quad} + \underline{\quad\quad} + \underline{\quad\quad}$

$= \underline{\quad\quad} + \underline{\quad\quad} + \underline{\quad\quad}$

$= \underline{\quad\quad\quad\quad\quad\quad}$

12. $279 = \underline{\quad\quad} + \underline{\quad\quad} + \underline{\quad\quad}$

$= \underline{\quad\quad} + \underline{\quad\quad} + \underline{\quad\quad}$

$= \underline{\quad\quad\quad\quad\quad\quad}$

Write Roman numerals.

13. 13 XIII

14. 25

15. 37

16. 54

17. 88

18. 129

9, 10 ■ OUR NUMERALS

Complete.

1. What does the digit 4 mean in 49? 4 tens

2. What does the digit 9 mean in 49? _____

3. What does the digit 8 mean in 80? _____

4. What does the digit 0 mean in 80? _____

In which place is each underlined digit?

5. 76 _____ *tens* _____

6. 54 _____

7. 23 _____

8. 41 _____

9. 60 _____

10. 63 _____

Complete to show expanded numerals.

11. $24 = \underline{\quad 2 \quad} \text{ tens} + \underline{\quad 4 \quad} \text{ ones}$

12. $39 = \underline{\quad \quad} \text{ tens} + \underline{\quad \quad} \text{ ones}$

13. $56 = \underline{\quad \quad} \text{ tens} + \underline{\quad \quad} \text{ ones}$

Write standard numerals.

14. 5 tens + 3 ones 53

15. $60 + 8$ _____

16. 4 tens + 1 one _____

17. $90 + 0$ _____

18. 8 tens + 0 _____

19. Eighty-five _____

Write expanded numerals.

20. 42 40 + 2

21. 36 _____

22. 59 _____

23. 63 _____

12, 14 ■ HUNDREDS, THOUSANDS

In which place is each underlined digit?

1. 1,564 _____ *hundreds* _____ 2. 2,641 _____
 3. 9,732 _____ 4. 4,503 _____

What is the value of each underlined digit?

5. 9,486 _____ *80* _____ 6. 2,437 _____
 7. 5,803 _____ 8. 6,043 _____

Write expanded numerals.

9. 3,427 _____ *3 thousands + 4 hundreds + 2 tens + 7* _____
 10. 2,617 _____

Write expanded numerals.

11. 5,421 5,000 + 400 + 20 + 1 _____
 12. 7,356 _____ + _____ + _____ + _____
 13. 341 _____ + _____ + _____

Write standard numerals.

14. 4 thousands + 8 hundreds + 6 tens + 9 _____ *4,869* _____
 15. 3 thousands + 2 hundreds + 1 ten + 8 _____
 16. 7 hundreds + 20 tens + 1 one _____
 17. 5,000 + 50 + 5 _____
 18. Eight thousand, six hundred, forty-nine _____

NAME _____ 7

16, 18 ■ PLACE VALUE

2	4	9	6	5	3	1
1,000,000's	100,000's	10,000's	1,000's	100's	10's	1's

Look at the table above. In which place is each?

1. 4 100,000's place
2. 5 _____
3. 9 _____
4. 2 _____

For 364,297,854 tell what digits are in these periods.

5. The ones period 854
6. The thousands period _____
7. The millions period _____

What is the value of each underlined digit?

8. 789,452,091 2,000
9. 789,462,091 _____
10. 42,731 _____
11. 217,058,213 _____
12. 1,098,425 _____
13. 264,906 _____

Separate these numerals into periods. Use commas.

14. 6 7, 4 6 3, 9 8 2
15. 2 1 6 9
16. 2 7 9 0 4 3 0 0

Write expanded numerals.

17. 72,421 70,000 + 2,000 + 400 + 20 + 1
18. 3,249 _____
19. 27,608 _____

20 ■ COMPARING NUMBERS

Complete.

1. = means _____ *is equal to* _____

2. > means _____

3. < means _____

Let's compare 7,843 and 6,843.

4. Compare ones, same or different _____ *same* _____

5. Compare tens, same or different _____

6. Compare hundreds, same or different _____

7. Compare thousands, same or different _____

8. 7 is greater than 6, therefore, 7,843 _____ 6,843.

Compare. Use =, >, <.

9. 3 _____ 7

10. 9 _____ 8

11. 95 _____ 96

12. 68 _____ 68

13. 6,429 _____ 6,439

14. 7,248 _____ 7,248

15. 300 _____ 800

16. 400 _____ 300

17. 562 _____ 567

18. 1,341 _____ 1,641

19. 5,278 _____ 5,278

20. 9,726 _____ 9,636

21. 961 _____ 861

22. 4,386 _____ 4,385

23. 876 _____ 876

24. 1,223 _____ 1,232

25. 650 _____ 641

26. 6,874 _____ 6,784

24 ■ FUNCTION MACHINES

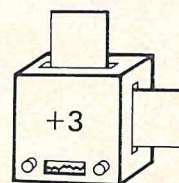
1. The rule for this function machine is *add 3*.

Complete this table.

Input	Output
2	5
	7
1	
	3

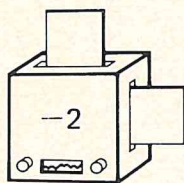
Means

_____ $2 + 3 = 5$ _____



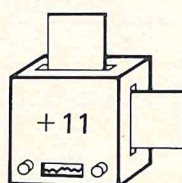
What are the rules for these machines?

2.



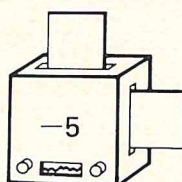
subtract 2

3.



4. Complete this table by using this rule.

Input	Output
6	1
11	
	3
10	
	0
5	



26 ■ NUMBER SENTENCES

Match each number sentence with its word name.

- | | |
|--------------------|---|
| 1. $10 < 20$ | nine is equal to four plus five |
| 2. $9 = 4 + 5$ | three plus two is less than nine |
| 3. $15 > 8$ | ten is less than twenty |
| 4. $3 + 2 < 9$ | five plus one is less than six plus three |
| 5. $5 + 1 < 6 + 3$ | fifteen is greater than eight |
| 6. $6 + 9 = 9 + 6$ | six plus nine is equal to nine plus six |

Which are equations? Which are inequalities?

7. $3 + 4 < 3 + 5$ inequality
8. $4 = 2 + 2$ _____
9. $2 + 3 < 3 + 4$ _____
10. $5 + 6 > 2 + 4$ _____
11. $3 + 4 > 2 + 1$ _____
12. $2 + 3 = 5$ _____
13. $9 < 15$ _____
14. $15 > 3 + 2$ _____
15. $7 = 4 + 3$ _____

Circle the number sentences that are equations.

16. $6 + 4 = 10$

17. $7 + 1 > 5 + 2$

18. $10 < 25$

19. $8 + 1 = 9$

20. $3 + 1 < 6 + 3$

21. $12 = 6 + 6$

27 ■ EQUATIONS: TRUE OR FALSE

True or false?

1. A dog has six feet. false
2. The sun is hot. _____
3. Halloween comes in June. _____
4. Snow is green. _____

True or false?

5. $8 - 5 = 3$ true
6. $14 = 7 + 7$ _____
7. $2 + 3 = 3 + 2$ _____
8. $9 - 3 = 8 - 3$ _____
9. $2 + 1 = 0 + 2$ _____

Change the underlined numerals to make true sentences.

10. $5 + \underline{4} = 8$ $5 + 3 = 8$
11. $\underline{6} - 3 = 4$ _____
12. $\underline{8} = 12 - 2$ _____
13. $2 + \underline{1} = 3 + 2$ _____
14. $9 + 10 = 18 + \underline{2}$ _____
15. $5 - 0 = 5 + \underline{1}$ _____
16. $8 + 6 = 7 + \underline{8}$ _____

28 ■ OPEN SENTENCES

Write True, False, or Open if the sentence is true, false, or open.

1. He is the new teacher. Open
2. A cow says "quack, quack." _____
3. It is all purple. _____
4. She is a doctor. _____
5. August comes before September. _____

Write True, False, or Open if the sentence is true, false, or open.

6. $\triangle + 4 = 9$ Open
7. $5 + 6 = 11$ _____
8. $14 - 7 = 8$ _____
9. $\square - 6 = 12$ _____
10. $\triangle + 3 = \square - 16$ _____

Make true sentences. Use whole numbers.

11. $\triangle + 3 = 5$ $2 + 3 = 5$
12. $2 + \triangle = 9$ _____
13. $\square - 6 = 6$ _____
14. $7 + 8 = \square + 7$ _____
15. $15 - 1 = 1 + \square$ _____
16. $\triangle - 9 = 9$ _____

30 ■ SENTENCES WITH TWO FRAMES

Make true sentences.

1. $\square + \square = 4$ _____ $2 + 2 = 4$

2. $\triangle + \triangle = 10$ _____

3. $\square + \square = 6$ _____

4. $\square + \square = 8$ _____

5. $\triangle + \triangle = 12$ _____

Make 5 true sentences. Use whole numbers.

6. $8 - \square = \triangle$

$8 - 0 = 8$ _____

$8 - 1 = 7$ _____

$8 - 2 = 6$ _____

$8 - 3 = 5$ _____

$8 - 4 = 4$ _____

7. $\triangle + \square = 9$

8. $\square - 5 = \triangle$

9. $\square - 4 = \triangle$

10. $\square + \triangle = 7$

11. $4 + \triangle = \square$

31, 32 ■ READING PROBLEMS

Work Space

1. Joan walks 5 blocks to school each day. Tom walks 2 blocks to school each day. How much farther does Joan walk than Tom?

a. What is the problem asking?

b. What information is needed to solve the problem?

c. Would you add or subtract to solve the problem?

d. Underline the number sentence that fits the story.

$$5 + 2 = \triangle$$

$$\triangle + 2 = 5$$

$$5 - 2 = \triangle$$

2. David drank 3 glasses of milk on Saturday and 4 glasses of milk on Sunday. How much milk did he drink in all?

a. What is the problem asking?

b. What are the important facts?

c. Underline the number sentence that fits the story.

$$4 - 3 = \triangle$$

$$3 + 4 = \triangle$$

$$4 + \triangle = 3$$

34 ■ ADDITION

Which underlined numbers are addends and which are sums?

1. $14 = 3 + \underline{11}$ _____ *addend* _____

2. $\underline{23} + 6 = 29$ _____

3. $52 + 30 = \underline{82}$ _____

4. $12 + \underline{4} = 16$ _____

5. $27 = \underline{13} + 14$ _____

6. $\underline{30} = 15 + 15$ _____

Write number sentences and make them true.

Work Space

7. There are 4 goldfish and 7 guppies in the fish bowl.
How many fish are there in all?

Answer _____

8. Betsy had 2 dolls. She got 3 more for her birthday.

How many dolls does Betsy have now?

Answer _____

Make true sentences. Use $=$, $<$, or $>$.

9. $0 + 1$ _____ $1 + 1$

10. $2 + 1$ _____ $1 + 2$

11. $3 + 4$ _____ $5 + 2$

12. $3 + 2$ _____ $5 + 1$

13. $5 + 4$ _____ $6 + 2$

14. $7 + 4$ _____ $5 + 6$

15. $9 + 4$ _____ $7 + 7$

16. $8 + 6$ _____ $9 + 9$

17. $5 + 8$ _____ $2 + 9$

18. $8 + 4$ _____ $9 + 2$

19. $5 + 3$ _____ $4 + 4$

20. $3 + 9$ _____ $4 + 7$

36 ■ PROPERTIES OF ADDITION

Which of the following properties are shown:

order property grouping property property of zero

1. $5 + (6 + 2) = (5 + 6) + 2$ _____ *grouping*

2. $3 + 2 = 2 + 3$ _____

3. $(4 + 1) + 2 = 4 + (1 + 2)$ _____

4. $6 + 0 = 6$ _____

Make true sentences.

5. $6 + 7 = 13$, so $7 + 6 =$ 13

6. $467 + 0 = 467$, so $0 + 467 =$ _____

7. $4 + (3 + 2) = 9$, so $(4 + 3) + 2 =$ _____

8. $749 + 153 = 902$, so $153 + 749 =$ _____

Make true sentences.

9. $(3 + 1) + 5 = 3 + (1 +$ 5 $)$

10. $673 + 914 =$ _____ $+ 673$

11. $369 + 0 =$ _____

12. $27 + (96 + 42) = ($ _____ $+ 96) + 42$

13. $123 + 229 = 229 +$ _____

14. $25 + 0 =$ _____

15. $(6 + 2) + 7 = 6 + (2 +$ _____ $)$

16. $13 + 16 =$ _____ $+ 13$

39 ■ SUBTRACTION

Is the underlined numeral the difference?

1. $12 - \underline{5} = 7$ no

2. $18 - 10 = \underline{8}$ _____

3. $20 - 10 = \underline{10}$ _____

4. $\underline{16} - 4 = 12$ _____

Write true number sentences to fit these problems.

Work Space

5. Peg had 12 cookies. She ate 7. How many were left?

Answer _____

6. Jim had 14 baseball cards. Sue had 18.
How many more did Sue have?

Answer _____

Make true sentences.

7. $10 - \underline{2} = 8$

8. $12 - 4 = \underline{\quad}$

9. $\underline{\quad} = 13 - 7$

10. $\underline{\quad} + 6 = 11$

11. $14 = 8 + \underline{\quad}$

12. $17 = \underline{\quad} + 9$

Subtract.

13.
$$\begin{array}{r} 16 \\ - 8 \\ \hline 8 \end{array}$$

14.
$$\begin{array}{r} 18 \\ - 9 \\ \hline \end{array}$$

15.
$$\begin{array}{r} 13 \\ - 6 \\ \hline \end{array}$$

16.
$$\begin{array}{r} 15 \\ - 7 \\ \hline \end{array}$$

17.
$$\begin{array}{r} 17 \\ - 8 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 15 \\ - 6 \\ \hline \end{array}$$

19.
$$\begin{array}{r} 17 \\ - 9 \\ \hline \end{array}$$

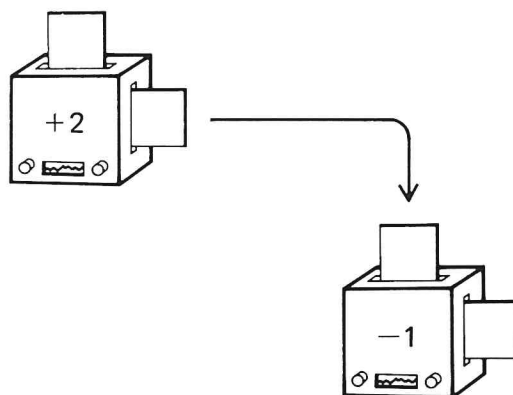
20.
$$\begin{array}{r} 14 \\ - 8 \\ \hline \end{array}$$

21.
$$\begin{array}{r} 12 \\ - 5 \\ \hline \end{array}$$

22.
$$\begin{array}{r} 11 \\ - 4 \\ \hline \end{array}$$

42 ■ ADDITION AND SUBTRACTION

Look at these two machines.



1. Start with 8. Add 2.
What is the sum?

 10

2. Subtract 1 from the sum.
What is the difference?

 9

3. Start with 5. Add 2.
What is the sum?

4. Subtract 1 from the sum.
What is the difference?

Add 3 to each. Then subtract 3 from the sum.

5. 6 $6 + 3 = 9$

 $9 - 3 = 6$

6. 4

7. 23

Subtract 5 from each. Then add 5 to the difference.

8. 8 $8 - 5 = 3$

 $3 + 5 = 8$

9. 17

10. 32

11. 18

48 ■ ONE ADDEND LESS THAN TEN

Write expanded numerals.

1. 24 means 2 tens + 4

2. 91 means _____ + _____

3. 40 means _____ + _____

Regroup.

4. 2 tens + 14

_____ tens + 1 ten + 4

_____ tens + 4

5. 5 tens + 16

_____ tens + _____ ten + _____

_____ tens + _____

Add. Use the expanded form.

6. $\begin{array}{r} 16 \rightarrow \underline{1} \text{ ten} + \underline{6} \\ + 9 \rightarrow \underline{\quad\quad\quad} 9 \end{array}$

1 ten + _____

_____ ten + 1 ten + 5

2 tens + 5

7. $\begin{array}{r} 43 \rightarrow \underline{\quad\quad} \text{ tens} + \underline{\quad\quad} \\ + 8 \rightarrow \underline{\quad\quad\quad} 8 \end{array}$

_____ tens + _____

_____ tens + _____ ten + _____

_____ tens + _____

Add. Use the short form.

8. $\begin{array}{r} \\ 27 \\ + 6 \\ \hline 33 \end{array}$

9. $\begin{array}{r} 43 \\ + 8 \\ \hline \end{array}$

10. $\begin{array}{r} 62 \\ + 9 \\ \hline \end{array}$

11. $\begin{array}{r} 34 \\ + 9 \\ \hline \end{array}$

12. $\begin{array}{r} 45 \\ + 5 \\ \hline \end{array}$

50 ■ ADDENDS: ORDER—GROUPING

Make true sentences.

1. $2 + 3 = 5$, so $3 + 2 = \underline{\underline{5}}$

2. $46 + 23 = 69$, so $23 + 46 = \underline{\hspace{2cm}}$

3. $2 + (3 + 4) = 9$, so $(2 + 3) + 4 = \underline{\hspace{2cm}}$

Add. Show the order and grouping of addends.

4.
$$\begin{array}{r} 2 \\ 3 \\ 4 \\ + 5 \\ \hline \end{array} \begin{array}{l} \nearrow 5 \\ \nearrow \\ \nearrow 9 \\ \downarrow 14 \end{array}$$

5.
$$\begin{array}{r} 5 \\ 1 \\ 3 \\ + 6 \\ \hline \end{array} \begin{array}{l} \text{---} \\ \text{---} \\ \nearrow \\ \nearrow \end{array}$$

6.
$$\begin{array}{r} 2 \\ 0 \\ 5 \\ + 8 \\ \hline \end{array} \begin{array}{l} \nearrow \\ \nearrow \\ \nearrow \\ \downarrow \end{array}$$

Add.

7.
$$\begin{array}{r} 5 \\ 3 \\ 2 \\ + 4 \\ \hline 14 \end{array}$$

8.
$$\begin{array}{r} 6 \\ 3 \\ 4 \\ + 6 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 7 \\ 1 \\ 0 \\ 3 \\ + 4 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 6 \\ 0 \\ 9 \\ 8 \\ 7 \\ + 9 \\ \hline \end{array}$$

Add.

11. $3 + 2 + 1 + 6 = \underline{\underline{12}}$

12. $8 + 4 + 2 + 3 = \underline{\hspace{2cm}}$

13. $5 + 2 + 0 + 3 + 6 = \underline{\hspace{2cm}}$

14. $8 + 2 + 1 + 3 + 3 = \underline{\hspace{2cm}}$

15. $6 + 5 + 4 + 3 + 2 + 1 = \underline{\hspace{2cm}}$

52 ■ ADDING LARGER NUMBERS

Write expanded numerals.

1. 549 5 hundreds + 4 tens + 9

2. 324 hundreds + tens +

3. 708 hundreds + tens +

4. 6,245 thousands + hundreds + tens +

Add. Use the expanded form.

5. 425 4 hundreds + 2 tens +

+ 324 3 hundreds + 2 tens + 4

 7 hundreds + tens +

6. 432 hundreds + tens + 2

+ 246 2 hundreds + tens +

 hundreds + tens +

Add. Use the short form. Add up to check.

7. 4 5 2
+ 3 4 1

7 9 3

8. 2 4
+ 6 5

9. 6 0 4
+ 3 6 5

10. 1, 6 3 5
+ 2, 2 1 3

11. 1 2 3
 2 1 2
+ 5 3 1

12. 1, 2 0 1
 3 1 4
+ 3, 0 2 0



54 ■ STORY PROBLEMS

Work Space

1. Nancy bought a hamburger for 30 cents, ice cream for 15 cents, and a baseball for 69 cents. How much did Nancy spend for food?

a. What does the problem ask?

b. What are the important facts?

c. What information is not needed?

d. Write a number sentence for the problem. Solve.

2. There are 5 basketballs, 4 volleyballs, 3 hockey sticks, and 2 tennis balls in the closet. How many balls are there in all?

Write a number sentence for the problem. Solve.

3. Pat wants a new bicycle that costs \$42.95. He has saved some money. How much more does he need to save to buy the bicycle?

a. What does the problem ask?

b. What information is missing?

56 ■ REGROUPING

Regroup.

1. 3 tens + 14 = 4 tens + 4

2. 6 tens + 16 = _____ tens + _____

3. 9 tens + 25 = _____ tens + _____

4. 7 tens + 20 = _____ tens + _____

5. 5 tens + 30 = _____ tens + _____

Add. Use the short form.

$$\begin{array}{r} 1 \\ 6. \quad 37 \\ + 28 \\ \hline 65 \end{array}$$

$$\begin{array}{r} 7. \quad 27 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 36 \\ + 45 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 48 \\ + 26 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 15 \\ 18 \\ + 24 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 56 \\ 22 \\ + 46 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 72 \\ 99 \\ 34 \\ + 51 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 35 \\ 26 \\ + 41 \\ \hline \end{array}$$

Add.

$$\begin{array}{r} 14. \quad 26 \\ 37 \\ + 48 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 59 \\ 14 \\ 24 \\ + 37 \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad 35 \\ 64 \\ 78 \\ + 99 \\ \hline \end{array}$$

58 ■ ADDING HUNDREDS

Add. Use the short form.

$$\begin{array}{r} \\ 1. \quad 367 \\ + 278 \\ \hline 645 \end{array}$$

$$\begin{array}{r} 2. \quad 257 \\ + 726 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 368 \\ + 497 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 426 \\ 202 \\ + 158 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 197 \\ 8 \\ + 45 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 345 \\ 20 \\ 09 \\ + 27 \\ \hline \end{array}$$

Add.

$$\begin{array}{r} 7. \quad 245 \\ 378 \\ + 525 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 468 \\ 30 \\ 27 \\ + 209 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 326 \\ 49 \\ 7 \\ + 700 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 996 \\ 7 \\ 5 \\ + 104 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 211 \\ 59 \\ 8 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 876 \\ 04 \\ 55 \\ + 82 \\ \hline \end{array}$$

Solve the problem.

- 13.** In a week, a big store sold 296 women's coats, 573 children's coats, and 304 men's coats. How many coats were sold in all?

Answer _____

Work Space

60 ■ ADDING THOUSANDS

Add. Use the short form.

$$\begin{array}{r} ^1 \\ 1. \quad 3,749 \\ + 2,134 \\ \hline 5,883 \end{array}$$

$$2. \quad 4,163 \\ + 7,438 \\ \hline$$

$$3. \quad 1,157 \\ + 5,628 \\ \hline$$

$$4. \quad 5,439 \\ + 1,285 \\ \hline$$

$$5. \quad 43,904 \\ + 76,559 \\ \hline$$

$$6. \quad 17,482 \\ + 25,645 \\ \hline$$

$$7. \quad 65,991 \\ + 44,347 \\ \hline$$

$$8. \quad 35,249 \\ + 40,153 \\ \hline$$

$$9. \quad 75,294 \\ + 9,999 \\ \hline$$

$$10. \quad 35,244 \\ 40,153 \\ + 15,863 \\ \hline$$

$$11. \quad 4,897 \\ 2,658 \\ + 3,214 \\ \hline$$

$$12. \quad 24,407 \\ 5,196 \\ + 16,425 \\ \hline$$

Solve these problems.

Work Space

- 13.** A pilot flew 3,138 miles from New York to Los Angeles. Then she flew 1,965 miles to Chicago. How many miles did she fly in all?

Answer _____

- 14.** 13,047 people attended the State Fair on Thursday, 9,476 on Friday and 15,255 on Saturday. How many attended in all?

Answer _____

64 ■ MONEY NOTATION

Write each of these in two ways.

1. Five dollars and forty-five cents. \$5.45 545¢
2. Thirty-five cents.
3. Two dollars and sixty-five cents.
4. Nine dollars and forty cents.
5. Six hundred twelve cents.

Match each with its word name.

- | | | |
|-------------|-------|--|
| 6. \$58.06 | _____ | Fifty-eight dollars and six cents |
| 7. \$5.74 | | Six hundred fifty-nine cents |
| 8. \$204.07 | | Three hundred seventy-six cents |
| 9. 659¢ | | Five dollars and seventy-four cents |
| 10. 376¢ | | Two hundred four dollars and seven cents |

Look at \$4,609.32. What digits are in these places?

- | | |
|-----------------------------------|--|
| 11. Tens of cents <u> 3 </u> | 12. Hundreds of dollars <u> </u> |
| 13. Ones of dollars <u> </u> | 14. Ones of cents <u> </u> |
| 15. Tens of dollars <u> </u> | 16. Thousands of dollars <u> </u> |

Look at \$7,429.68. What digits are in these places?

- | | |
|---------------------------------------|--|
| 17. Ones of dollars <u> 9 </u> | 18. Thousands of dollars <u> </u> |
| 19. Ones of cents <u> </u> | 20. Tens of dollars <u> </u> |
| 21. Hundreds of dollars <u> </u> | 22. Tens of cents <u> </u> |

66 ■ DOLLARS AND CENTS

Add. Use the short form.

$$\begin{array}{r} \\ 1. \quad \$8.98 \\ + 3.95 \\ \hline \$12.93 \end{array}$$

$$\begin{array}{r} 2. \quad \$1.95 \\ + 8.46 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad \$4.08 \\ + 3.99 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad \$46.29 \\ + 2.09 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad \$47.15 \\ + 3.68 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad \$17.42 \\ + 75.04 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad \$9.68 \\ 4.59 \\ + 3.85 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad \$6.41 \\ 2.60 \\ + 75.39 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad \$97.45 \\ 45.86 \\ + 79.79 \\ \hline \end{array}$$

Solve these problems.

Work Space

10. In May, Maria saved \$9.50, in June \$4.54, and in July \$7.16. How much did she save in all?

Answer _____

11. In November, a club collected \$9.92, in December \$8.85, and in January, \$19.56. How much did they collect in all?

Answer _____

12. Jack spent \$95.51 for a new suit and \$28.75 for a new pair of shoes. How much did he spend in all?

Answer _____

68, 70 ■ ROUNDING NUMBERS

Do you think the number is exact or rounded?

1. 5,429 exact

2. 328 _____

3. 500 _____

4. 44,000 _____

5. 2,753 _____

6. 10,000 _____

Round to the nearest ten.

7. 56 60

8. 69 _____

9. 23 _____

10. 55 _____

11. 92 _____

12. 16 _____

Round to the nearest hundred.

13. 483 500

14. 367 _____

15. 134 _____

16. 750 _____

17. 677 _____

18. 109 _____

Round to the nearest thousand.

19. 7,475 7,000

20. 2,748 _____

21. 8,299 _____

22. 6,400 _____

Round to the nearest dollar.

23. \$4.26 \$4.00

24. \$1.95 _____

25. \$6.25 _____

26. \$8.50 _____

27. \$4.63 _____

28. \$5.30 _____

72 ■ ESTIMATING SUMS

Estimate the sum by rounding each addend to the nearest ten.

$$1. 46 + 23 + 75 \quad \underline{50} + \underline{20} + \underline{80} = \underline{\hspace{2cm}}$$

$$2. 17 + 63 + 45 \quad \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$3. 78 + 21 + 53 \quad \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Estimate the sum by rounding each addend to the nearest hundred.

$$4. 326 + 794 + 652$$

$$\underline{300} + \underline{800} + \underline{700} = \underline{1,800}$$

$$5. 716 + 257 + 350$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$6. 429 + 899 + 519$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Estimate the sum by rounding each addend to the nearest dollar.

$$\begin{array}{r} 7. \quad \$4.29 \\ \quad + 6.98 \\ \hline \end{array} \quad \begin{array}{r} \$4.00 \\ + 7.00 \\ \hline \$11.00 \end{array}$$

$$\begin{array}{r} 8. \quad \$4.75 \\ \quad + 6.14 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad \$3.76 \\ \quad 9.02 \\ \quad + 2.50 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad \$1.35 \\ \quad .50 \\ \quad + 6.95 \\ \hline \end{array}$$

78 ■ REMEMBERING SUBTRACTION

Is the underlined digit an addend or the difference?

1. $3 + \underline{5} = 8$ _____ *addend* _____

2. $12 - 7 = \underline{5}$ _____

3. $\underline{5} + 8 = 13$ _____

4. $\underline{12} = 14 - 2$ _____

5. $15 = 20 - \underline{5}$ _____

Find the difference.

6. $12 - 6 = \underline{\quad 6 \quad}$

7. $10 - 7 = \underline{\quad \quad}$

8. $\underline{\quad \quad} = 15 - 8$

9. $\underline{\quad \quad} = 30 - 25$

Find the missing addend.

10. $15 + \underline{\quad 10 \quad} = 25$

11. $3 + \underline{\quad \quad} = 10$

12. $\underline{\quad \quad} + 15 = 18$

13. $24 = \underline{\quad \quad} + 12$

Make true sentences.

14. $40 - 10 = \underline{\quad 30 \quad}$ and $\underline{\quad 30 \quad} + 10 = 40$

15. $25 - 5 = \underline{\quad \quad}$ and $\underline{\quad \quad} + 5 = 25$

16. $\underline{\quad \quad} + 2 = 20$ and $20 - 2 = \underline{\quad \quad}$

17. $\underline{\quad \quad} + 6 = 15$ and $15 - 6 = \underline{\quad \quad}$

Which do *not* have whole numbers for the difference?

18.	$\begin{array}{r} 18 \\ - 19 \end{array}$	19.	$\begin{array}{r} 9 \\ - 4 \end{array}$	20.	$\begin{array}{r} 9 \\ - 24 \end{array}$	21.	$\begin{array}{r} 25 \\ - 6 \end{array}$	22.	$\begin{array}{r} 12 \\ - 7 \end{array}$	23.	$\begin{array}{r} 37 \\ - 39 \end{array}$
-----	---	-----	---	-----	--	-----	--	-----	--	-----	---

79 ■ TENS, HUNDREDS, THOUSANDS

Complete.

$$\begin{array}{r}
 1. \quad 12 \text{ thousands} \quad \underline{12,000} \\
 - \quad 4 \text{ thousands} \quad - \quad \underline{4,000} \\
 \hline
 8 \text{ thousands} \quad \underline{8,000}
 \end{array}$$

$$\begin{array}{r}
 2. \quad 5 \text{ tens} \quad \underline{\quad\quad\quad} \\
 - \quad 3 \text{ tens} \quad - \quad \underline{\quad\quad\quad} \\
 \hline
 2 \text{ tens} \quad \underline{\quad\quad\quad}
 \end{array}$$

$$\begin{array}{r}
 3. \quad 14 \text{ hundreds} \quad \underline{\quad\quad\quad} \\
 - \quad 5 \text{ hundreds} \quad - \quad \underline{\quad\quad\quad} \\
 \hline
 \underline{\quad\quad\quad} 9 \text{ hundreds} \quad \underline{\quad\quad\quad}
 \end{array}$$

$$\begin{array}{r}
 4. \quad \underline{\quad\quad\quad} \text{ thousands} \quad 18,000 \\
 - \quad \underline{\quad\quad\quad} \text{ thousands} \quad - \quad \underline{9,000} \\
 \hline
 \underline{\quad\quad\quad} \text{ thousands} \quad 9,000
 \end{array}$$

$$\begin{array}{r}
 5. \quad 13 \text{ tens} \quad \underline{\quad\quad\quad} \\
 - \quad 5 \text{ tens} \quad - \quad \underline{\quad\quad\quad} \\
 \hline
 8 \text{ tens} \quad \underline{\quad\quad\quad}
 \end{array}$$

$$\begin{array}{r}
 6. \quad 15 \text{ tens} \quad \underline{\quad\quad\quad} \\
 - \quad 7 \text{ tens} \quad - \quad \underline{\quad\quad\quad} \\
 \hline
 8 \text{ tens} \quad \underline{\quad\quad\quad}
 \end{array}$$

Subtract.

$$\begin{array}{r}
 7. \quad 15,000 \\
 - \quad 6,000 \\
 \hline
 9,000
 \end{array}$$

$$\begin{array}{r}
 8. \quad 80 \\
 - \quad 20 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 9. \quad 900 \\
 - \quad 600 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 10. \quad 1,200 \\
 - \quad 600 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 11. \quad 13,000 \\
 - \quad 7,000 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 12. \quad 11,000 \\
 - \quad 3,000 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 13. \quad 17,000 \\
 - \quad 8,000 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 14. \quad 80 \\
 - \quad 60 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 15. \quad 900 \\
 - \quad 500 \\
 \hline
 \end{array}$$

80 ■ FORMS FOR SUBTRACTION

Complete.

$$\begin{array}{r}
 1. \quad 479 \rightarrow \underline{\quad 4 \quad} \text{ hundreds} + \underline{\quad 7 \quad} \text{ tens} + \underline{\quad 9 \quad} \\
 \underline{- 326} \rightarrow \underline{\quad 3 \quad} \text{ hundreds} + \underline{\quad 2 \quad} \text{ tens} + \underline{\quad 6 \quad} \\
 \underline{\quad 1 \quad} \text{ hundred} + \underline{\quad \quad} \text{ tens} + \underline{\quad \quad} = \underline{153}
 \end{array}$$

$$\begin{array}{r}
 2. \quad 576 \rightarrow \underline{\quad \quad} \text{ hundreds} + \underline{\quad \quad} \text{ tens} + \underline{\quad \quad} \\
 \underline{- 341} \rightarrow \underline{\quad \quad} \text{ hundreds} + \underline{\quad \quad} \text{ tens} + \underline{\quad \quad} \\
 \underline{\quad \quad} \text{ hundreds} + \underline{\quad \quad} \text{ tens} + \underline{\quad \quad} = \underline{\quad \quad}
 \end{array}$$

$$\begin{array}{r}
 3. \quad 408 \rightarrow \underline{\quad \quad} \text{ hundreds} + \underline{\quad \quad} \text{ tens} + \underline{\quad \quad} \\
 \underline{- 200} \rightarrow \underline{\quad \quad} \text{ hundreds} + \underline{\quad \quad} \text{ tens} + \underline{\quad \quad} \\
 \underline{\quad \quad} \text{ hundreds} + \underline{\quad \quad} \text{ tens} + \underline{\quad \quad} = \underline{\quad \quad}
 \end{array}$$

Subtract. Use the short form.

$$\begin{array}{r}
 4. \quad 7,259 \\
 \underline{- 2,142} \\
 5,117
 \end{array}$$

$$\begin{array}{r}
 5. \quad 97 \\
 \underline{- 23}
 \end{array}$$

$$\begin{array}{r}
 6. \quad 69 \\
 \underline{- 35}
 \end{array}$$

$$\begin{array}{r}
 7. \quad 429 \\
 \underline{- 115}
 \end{array}$$

$$\begin{array}{r}
 8. \quad 986 \\
 \underline{- 235}
 \end{array}$$

$$\begin{array}{r}
 9. \quad 564 \\
 \underline{- 342}
 \end{array}$$

$$\begin{array}{r}
 10. \quad 8,287 \\
 \underline{- 4,152}
 \end{array}$$

$$\begin{array}{r}
 11. \quad 6,759 \\
 \underline{- 2,445}
 \end{array}$$

81 ■ CHECKING SUBTRACTION

Subtract and check.

$$\begin{array}{r} 1. \quad 375 \\ - 243 \\ \hline 132 \end{array}$$

Check
 $\begin{array}{r} 243 \\ + 132 \\ \hline 375 \end{array}$

$$\begin{array}{r} 2. \quad 58 \\ - 35 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 97 \\ - 25 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 695 \\ - 453 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 3,597 \\ - 2,004 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 7,596 \\ - 3,274 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 3,692 \\ - 491 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 9,898 \\ - 8,787 \\ \hline \end{array}$$

Subtract and check.

$$\begin{array}{r} 9. \quad 275 \\ - 104 \\ \hline \\ + 171 \\ \hline 275 \end{array}$$

$$\begin{array}{r} 10. \quad 248 \\ - 115 \\ \hline \\ + \quad \quad \quad \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 567 \\ - 204 \\ \hline \\ + \quad \quad \quad \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 4,698 \\ - 2,386 \\ \hline \\ + \quad \quad \quad \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 842 \\ - 631 \\ \hline \\ + \quad \quad \quad \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 3,287 \\ - 2,165 \\ \hline \\ + \quad \quad \quad \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 9,689 \\ - 7,436 \\ \hline \\ + \quad \quad \quad \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad 2,361 \\ - 1,150 \\ \hline \\ + \quad \quad \quad \\ \hline \end{array}$$

82 ■ RENAMING

Complete.

1. $372 = 3 \text{ hundreds} + \underline{\text{7}} \text{ tens} + 2$

$2 \text{ hundreds} + 1 \text{ hundred} + \underline{\text{7}} \text{ tens} + 2$

$2 \text{ hundreds} + \underline{\text{17}} \text{ tens} + 2$

2. $54 = 5 \text{ tens} + \underline{\hspace{2cm}}$

$4 \text{ tens} + 1 \text{ ten} + \underline{\hspace{2cm}}$

$4 \text{ tens} + \underline{\hspace{2cm}}$

3. $687 = 6 \text{ hundreds} + 8 \text{ tens} + \underline{\hspace{2cm}}$

$6 \text{ hundreds} + 7 \text{ tens} + 1 \text{ ten} + \underline{\hspace{2cm}}$

$6 \text{ hundreds} + 7 \text{ tens} + \underline{\hspace{2cm}}$

4. $986 = 9 \text{ hundreds} + \underline{\hspace{2cm}} \text{ tens} + 6$

$8 \text{ hundreds} + 1 \text{ hundred} + \underline{\hspace{2cm}} \text{ tens} + 6$

$8 \text{ hundreds} + \underline{\hspace{2cm}} \text{ tens} + 6$

Complete.

5. $758 = 7 \text{ hundreds} + \underline{\text{5}} \text{ tens} + 8$

$= 6 \text{ hundreds} + \underline{\text{15}} \text{ tens} + 8$

7. $542 = 5 \text{ hundreds} + \underline{\hspace{2cm}} \text{ tens} + 2$

$= 4 \text{ hundreds} + \underline{\hspace{2cm}} \text{ tens} + 2$

6. $75 = 7 \text{ tens} + \underline{\hspace{2cm}}$

$= 6 \text{ tens} + \underline{\hspace{2cm}}$

8. $46 = 4 \text{ tens} + \underline{\hspace{2cm}}$

$= 3 \text{ tens} + \underline{\hspace{2cm}}$

84 ■ SUBTRACTION WITH RENAMING

Rename and subtract.

$$\begin{array}{r} \overset{6}{\cancel{7}} \text{ tens} + \overset{12}{\cancel{2}} \\ - 2 \text{ tens} + 6 \\ \hline \end{array}$$

$$\underline{\hspace{1cm}} 4 \text{ tens} + \underline{\hspace{1cm}} 6$$

$$\begin{array}{r} 5 \text{ tens} + 3 \\ - 3 \text{ tens} + 9 \\ \hline \end{array}$$

$$\underline{\hspace{1cm}} \text{ tens} + \underline{\hspace{1cm}}$$

$$\begin{array}{r} 8 \text{ tens} + 0 \\ - 4 \text{ tens} + 8 \\ \hline \end{array}$$

$$\underline{\hspace{1cm}} \text{ tens} + \underline{\hspace{1cm}}$$

$$\begin{array}{r} 7 \text{ tens} + 6 \\ - 6 \text{ tens} + 9 \\ \hline \end{array}$$

$$\underline{\hspace{1cm}} \text{ tens} + \underline{\hspace{1cm}}$$

$$\begin{array}{r} 5 \text{ hundreds} + 6 \text{ tens} + 3 \\ - 3 \text{ hundreds} + 2 \text{ tens} + 4 \\ \hline \end{array}$$

$$\underline{\hspace{1cm}} \text{ hundreds} + \underline{\hspace{1cm}} \text{ tens} + \underline{\hspace{1cm}}$$

Subtract. Use the short form.

$$\begin{array}{r} \overset{6}{\cancel{3}} \overset{12}{\cancel{7}} \\ - 128 \\ \hline 244 \end{array}$$

$$\begin{array}{r} 93 \\ - 25 \\ \hline \end{array}$$

$$\begin{array}{r} 573 \\ - 128 \\ \hline \end{array}$$

$$\begin{array}{r} 475 \\ - 237 \\ \hline \end{array}$$

$$\begin{array}{r} 560 \\ - 359 \\ \hline \end{array}$$

$$\begin{array}{r} 831 \\ - 405 \\ \hline \end{array}$$

86 ■ RENAMING LARGER NUMBERS

Rename and subtract.

$$\begin{array}{r}
 \overset{4}{5} \text{ hundreds} + \overset{13}{3} \text{ tens} + 7 \\
 - 2 \text{ hundreds} + 5 \text{ tens} + 3 \\
 \hline
 \end{array}$$

$\underline{\quad 2 \quad}$ hundreds + $\underline{\quad 8 \quad}$ tens + $\underline{\quad 4 \quad} = \underline{284}$

$$\begin{array}{r}
 9 \text{ hundreds} + 2 \text{ tens} + 7 \\
 - 4 \text{ hundreds} + 7 \text{ tens} + 4 \\
 \hline
 \end{array}$$

$\underline{\hspace{1cm}}$ hundreds + $\underline{\hspace{1cm}}$ tens + $\underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

$$\begin{array}{r}
 8 \text{ hundreds} + 0 \text{ tens} + 6 \\
 - 3 \text{ hundreds} + 5 \text{ tens} + 0 \\
 \hline
 \end{array}$$

$\underline{\hspace{1cm}}$ hundreds + $\underline{\hspace{1cm}}$ tens + $\underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

$$\begin{array}{r}
 6 \text{ hundreds} + 5 \text{ tens} + 4 \\
 - 3 \text{ hundreds} + 8 \text{ tens} + 2 \\
 \hline
 \end{array}$$

$\underline{\hspace{1cm}}$ hundreds + $\underline{\hspace{1cm}}$ tens + $\underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

Subtract. Use the short form.

$$\begin{array}{r}
 \overset{4}{5}, \overset{12}{2} 7 9 \\
 - 2, 7 4 1 \\
 \hline
 2, 5 3 8
 \end{array}$$

$$\begin{array}{r}
 7 2 8 \\
 - 3 6 3 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 8 0 3 \\
 - 2 9 0 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 4, 6 7 2 \\
 - 2, 4 9 1 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 5, 4 9 8 \\
 - 1, 9 2 2 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 7, 0 4 3 \\
 - 5, 1 0 0 \\
 \hline
 \end{array}$$

88 ■ RENAMING MORE THAN ONCE

Subtract. Use the short form.

$$\begin{array}{r}
 \overset{11}{5} \overset{\cancel{11}}{\cancel{2} \cancel{1}} \\
 - 385 \\
 \hline
 236
 \end{array}$$

$$\begin{array}{r}
 835 \\
 - 459 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 702 \\
 - 325 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 3,271 \\
 - 1,524 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 2,632 \\
 - 1,275 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 8,340 \\
 - 2,858 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 42,192 \\
 - 39,348 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 724 \\
 - 465 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 8,160 \\
 - 3,205 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 29,621 \\
 - 18,976 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 47,235 \\
 - 15,476 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 26,227 \\
 - 13,549 \\
 \hline
 \end{array}$$

Solve this problem.

Work Space

- 13.** In Minneapolis, 46,724 fans attended a football game. In Boston, 58,310 fans attended a game. How many more fans were there in Boston?

Answer _____

Rename the hundreds and the thousands as tens.

1. $6,002 = 600 \text{ tens} + \underline{\underline{2}}$

2. $806 = 80 \text{ tens} + \underline{\hspace{2cm}}$

$$= \underline{599} \text{ tens} + \underline{12}$$

$$= \underline{\hspace{1cm}} \text{ tens} + 16$$

3. $703 = \underline{\hspace{2cm}}$ tens + 3

4. $407 = \underline{\hspace{2cm}}$ tens + 7

$$= 69 \text{ tens} + \underline{\hspace{2cm}}$$

= _____ tens + _____

Subtract. Use the short form.

5.
$$\begin{array}{r} 9 \\ 4 \cancel{10} 14 \\ \underline{- 246} \\ 258 \end{array}$$

6.
$$\begin{array}{r} 602 \\ -475 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 8,003 \\ - 3,425 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 900 \\ - 765 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 300 \\ - 146 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 4,006 \\ - 2,149 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 4,703 \\ - 2,425 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 40,030 \\ - 21,041 \\ \hline \end{array}$$

13.
$$\begin{array}{r} 70,500 \\ - 49,876 \\ \hline \end{array}$$

Solve this problem.

Work Space

14. During June, 30,070 cartons of milk were sold at Woodside School. At Updale School, 19,182 cartons were sold. How many more were sold at Woodside?

Answer

97 ■ DOLLARS AND CENTS

Subtract.

$$\begin{array}{r} 1. \ \$8.47 \\ - 3.69 \\ \hline \$4.78 \end{array}$$

$$\begin{array}{r} 2. \ \$7.85 \\ - 4.99 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \ \$30.25 \\ - 19.98 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \ \$40.00 \\ - 17.15 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \ \$76.49 \\ - 28.95 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \ \$23.50 \\ - 11.82 \\ \hline \end{array}$$

Solve these problems.

Work Space

7. Susan bought a notebook for \$1.29. She gave the clerk \$2.00. How much change should she receive?

Answer _____ *\$.71 change*

8. Tim bought a flashlight for \$1.79. Carol bought a flashlight for \$2.50. How much more did Carol pay for her flashlight?

Answer _____

9. Jean saw a dress for \$8.50. She bought it 2 days later on sale for \$5.98. How much did she save?

Answer _____

10. Mr. Martinez sold his old motor bike for \$169.50. He bought a new one for \$310.95. How much more did the new one cost?

Answer _____

98 ■ MAKING CHANGE

List how you would return the change.

1. Ann buys soap for 59¢. She gives you a \$5 bill.
You give her change.

GIVE	SAY
<u>1 penny</u>	<u>\$.60</u>
<u>1 nickel</u>	<u>\$.65</u>
<u>1 dime</u>	<u>\$.75</u>
<u>1 quarter</u>	<u>\$1.00</u>
<u>4 one dollar bills</u>	<u>\$2.00, \$3.00, \$4.00, \$5.00</u>

	GIVE	SAY
2. Hat for \$7.24	<u> </u>	<u> </u>
Given a \$20 bill	<u> </u>	<u> </u>
	<u> </u>	<u> </u>
	<u> </u>	<u> </u>
3. Book for \$8.15	<u> </u>	<u> </u>
Given a \$10 bill	<u> </u>	<u> </u>
	<u> </u>	<u> </u>
4. Model for \$3.98	<u> </u>	<u> </u>
Given a \$10 bill	<u> </u>	<u> </u>
	<u> </u>	<u> </u>

100 ■ ESTIMATING DIFFERENCES

Estimate the differences by rounding.

$$\begin{array}{r} 1. \quad 79 \\ - 45 \\ \hline \end{array} \quad \begin{array}{r} \underline{80} \\ - \underline{50} \\ \hline 30 \end{array}$$

$$\begin{array}{r} 2. \quad 52 \\ - 28 \\ \hline \end{array} \quad \begin{array}{r} \underline{\quad\quad} \\ - \underline{\quad\quad} \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 93 \\ - 69 \\ \hline \end{array} \quad \begin{array}{r} \underline{\quad\quad} \\ - \underline{\quad\quad} \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 455 \\ - 235 \\ \hline \end{array} \quad \begin{array}{r} \underline{\quad\quad} \\ - \underline{\quad\quad} \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 785 \\ - 240 \\ \hline \end{array} \quad \begin{array}{r} \underline{\quad\quad} \\ - \underline{\quad\quad} \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 67 \\ - 62 \\ \hline \end{array} \quad \begin{array}{r} \underline{\quad\quad} \\ - \underline{\quad\quad} \\ \hline \end{array}$$

Solve these problems by estimating.

Work Space

7. Phil wants to buy a baseball glove that costs \$6.98. He has saved \$3.49. About how much more does he need to save?

Estimate $\$7.00 - \$3.00 = \$4.00$

8. Amy collected 108 bottles for the bottle drive. If she collects 192 she will win a prize. About how many more must she collect to win a prize?

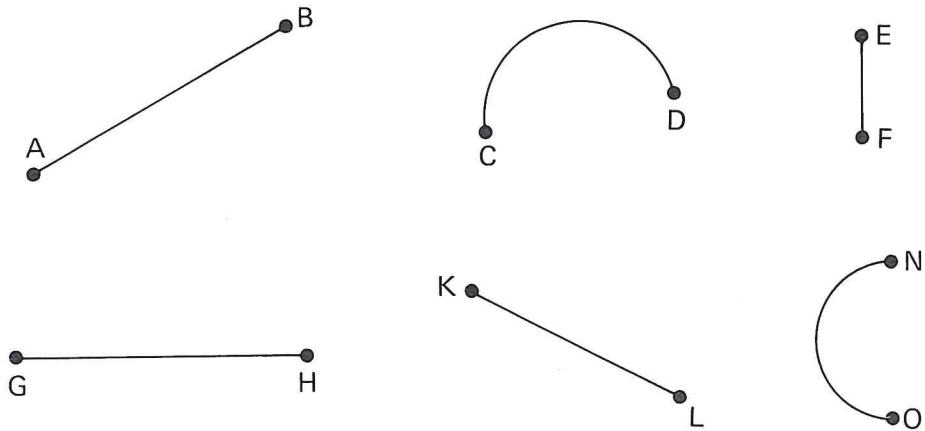
Estimate

9. June had 75 marbles. She lost 38 marbles in a game. About how many does she have left?

Estimate

104, 106 ■ LINE SEGMENTS

Study these figures for Exercises 1 and 2.



1. Name the line segments.

AB,

2. Name each line segment in another way.

BA,

3. Draw a line segment. Name it \overline{YZ} .

Name each line segment.

4. AB

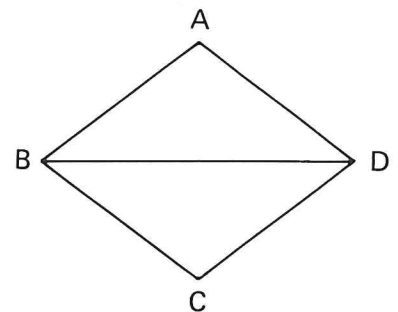
5. _____

6. _____

7. _____

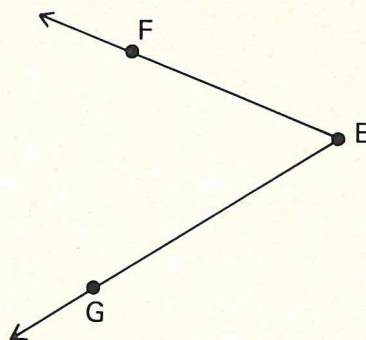
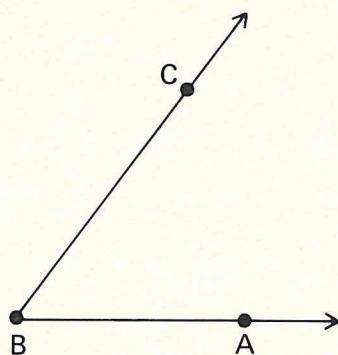
8. _____

9. How many line segments are named? _____



108, 110 ■ RAYS AND ANGLES

Use these figures for Exercises 1 – 12.



Name each ray.

1. \overrightarrow{BC} 2. _____ 3. _____ 4. _____

Name each angle in 2 ways.

5. $\angle CBA$ 6. _____

Name the sides of each angle.

7. $\angle CBA$ 8. $\angle FEG$

Name the vertex of each angle.

9. $\angle CBA$ 10. $\angle FEG$

Draw each.

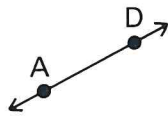
11. point B 12. \overline{KC} 13. \overrightarrow{AB} 14. \overrightarrow{BA}

15. A right angle.
Name it $\angle ABC$.
16. An angle smaller than
a right angle.

114, 116 ■ LINES

Place a \checkmark after the lines.

1.

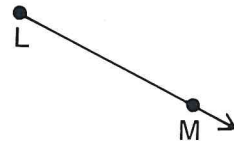


_____ \checkmark _____

2.



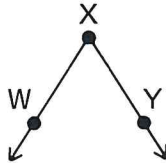
3.



4.



5.



6.



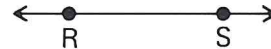
Name each line in two ways.

7.



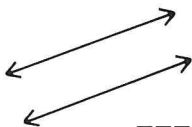
\overleftrightarrow{BC} _____

8.



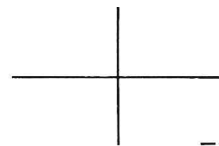
Which pairs look parallel? Which intersect?

9.

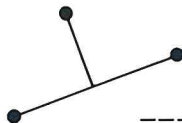


parallel _____

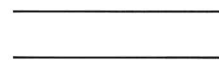
10.



11.



12.



13. Draw \overleftrightarrow{RS} .

14. Draw \overleftrightarrow{BC} so that it crosses \overleftrightarrow{RS} .

15. Put an X at the point where they cross.

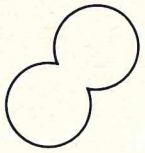
16. Draw two lines that are parallel.

Work Space

118 ■ CURVES

Place a ✓ after the closed curves.

1.



✓

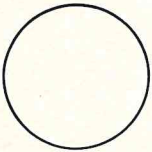
2.



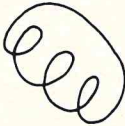
3.



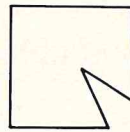
4.



5.

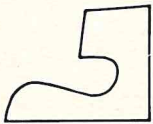


6.



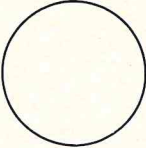
Place a ✓ after the simple closed curves.

7.

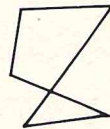


✓

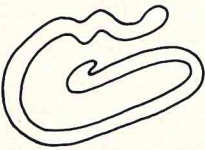
8.



9.



10.



11.



12.



13. Draw two curves.

14. Draw two simple closed curves.

15. Draw two closed curves that are not simple.

120, 122 ■ CIRCLES

Study the circle on the right. Then name 4 radii.

1. \overline{MA}

2. _____

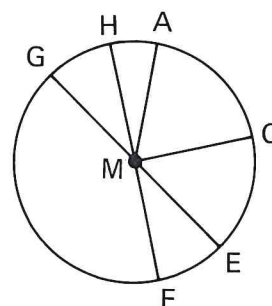
3. _____

4. _____

Name 2 diameters.

5. \overline{EG}

6. _____



Work Space

7. Draw a circle. Make the radius $\frac{1}{2}$ inch.

Mark the center point A.

Draw 3 radii: \overline{AB} , \overline{AC} , \overline{AD} .

Draw a diameter \overline{RS} .

8. How long is the diameter of the circle you drew above? _____

The lengths of the radii of some circles are given below.
What are the lengths of the diameters?

9. 5 feet _____

10. 8 yards _____

11. 6 centimeters _____

12. 10 inches _____

13. 9 inches _____

14. 4 meters _____

123 ■ USING CHARTS

ATTENDANCE AT LITTLE LEAGUE GAMES				
People	Monday	Wednesday	Thursday	Saturday
Men	4	6	3	60
Women	22	27	29	35
Children	38	25	28	22

1. How many men attended the games during the week?

Work Space

Answer _____

2. How many women attended the games during the week?

Answer _____

3. How many children attended the games during the week?

Answer _____

What was the total attendance for each day?

4. Monday _____

5. Wednesday _____

6. Thursday _____

7. Saturday _____

8. On what day was the total attendance greatest?

Answer _____

9. What was the total attendance for the four games?

Answer _____

10. On Monday, how many more women were there than men?

Answer _____

11. On Saturday, how many more men were there than children?

Answer _____

126 ■ MULTIPLICATION

Make true sentences.

1. $7 + 7 + 7 = \underline{21}$

2. $6 + 6 = \underline{\quad\quad}$

$3 \times 7 = \underline{21}$

$2 \times 6 = \underline{\quad\quad}$

3. $5 + 5 + 5 + 5 = \underline{\quad\quad}$

4. $9 + 9 + 9 + 9 = \underline{\quad\quad}$

$4 \times 5 = \underline{\quad\quad}$

$4 \times 9 = \underline{\quad\quad}$

Write an addition sentence to find each product.

5. $3 \times 8 = \underline{24}$
 $8 + 8 + 8 = 24$

6. $6 \times 6 = \underline{\quad\quad}$

7. $5 \times 8 = \underline{\quad\quad}$

Is the underlined numeral a factor or the product?

8. $24 = \underline{6} \times 4$ *factor*

9. $3 \times 6 = \underline{18}$

10. $\underline{4} \times 5 = 20$

11. $\underline{6} \times 6 = 36$

Write a multiplication for each array. Find the products.

12. $\begin{array}{cccccc} \text{X} & \text{X} & \text{X} & \text{X} & \text{X} \\ \text{X} & \text{X} & \text{X} & \text{X} & \text{X} \end{array}$

13. $\begin{array}{ccccccccc} \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet & \bullet \end{array}$

14. $\begin{array}{cccc} \star & \star & \star & \star \\ \star & \star & \star & \star \\ \star & \star & \star & \star \end{array}$

$2 \times 5 = 10$

Draw an array for each multiplication.

15. 3×6

□	□	□	□	□	□
□	□	□	□	□	□
□	□	□	□	□	□

16. 4×5

17. 3×3

128 ■ ORDER PROPERTY

Draw arrays. Find the products.

1. $2 \times 4 = \underline{\underline{8}}$

$4 \times 2 = \underline{\underline{8}}$

x	x	x	x
---	---	---	---

x	x	x	x
---	---	---	---

2. $3 \times 4 = \underline{\hspace{2cm}}$

$4 \times 3 = \underline{\hspace{2cm}}$

Make true sentences.

3. $9 \times 5 = 45$, so

$5 \times 9 = \underline{\underline{45}}$

5. $7 \times 5 = 35$, so

$5 \times 7 = \underline{\hspace{2cm}}$

7. $8 \times 9 = 72$, so

$9 \times 8 = \underline{\hspace{2cm}}$

4. $4 \times 6 = 24$, so

$6 \times 4 = \underline{\hspace{2cm}}$

6. $3 \times 8 = 24$, so

$8 \times 3 = \underline{\hspace{2cm}}$

8. $7 \times 6 = 42$, so

$6 \times 7 = \underline{\hspace{2cm}}$

Make true sentences.

9. $6 \times 5 = 5 \times \underline{\underline{6}}$

10. $7 \times 4 = 4 \times \underline{\hspace{2cm}}$

11. $5 \times 8 = \underline{\hspace{2cm}} \times 5$

12. $9 \times 3 = 3 \times \underline{\hspace{2cm}}$

13. $8 \times 7 = 7 \times \underline{\hspace{2cm}}$

14. $6 \times 9 = \underline{\hspace{2cm}} \times 6$

129 ■ DIVISION

Make true sentences. Use multiplication to help you.

1. $30 \div 6 = \underline{\underline{5}}$ and $\underline{\underline{5}} \times 6 = 30$

2. $28 \div 7 = \underline{\hspace{1cm}}$ and $\underline{\hspace{1cm}} \times 7 = 28$

3. $18 \div 9 = \underline{\hspace{1cm}}$ and $\underline{\hspace{1cm}} \times 9 = 18$

4. $24 \div 3 = \underline{\hspace{1cm}}$ and $\underline{\hspace{1cm}} \times 3 = 24$

$2 \times 9 = 18$

$5 \times 6 = 30$

$7 \times 4 = 28$

$3 \times 8 = 24$

Write two related division sentences for each.

5. $4 \times 6 = 24$ $\underline{24 \div 4 = 6}$ and $\underline{24 \div 6 = 4}$

6. $3 \times 5 = 15$ $\underline{\hspace{1cm}}$ and $\underline{\hspace{1cm}}$

7. $7 \times 8 = 56$ $\underline{\hspace{1cm}}$ and $\underline{\hspace{1cm}}$

Make true division sentences.

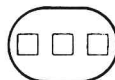
8. 

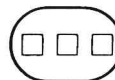


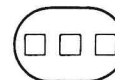


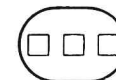
$\underline{15 \div 5 = 3}$

9.









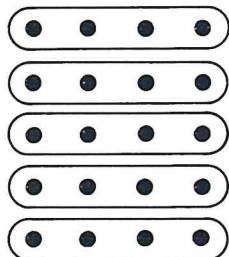
$\underline{\hspace{1cm}}$

Draw dots to show each division. Make true sentences.

10. $20 \div 5 = \underline{\underline{4}}$

11. $48 \div 8 = \underline{\hspace{1cm}}$

12. $16 \div 2 = \underline{\hspace{1cm}}$



131 ■ DIVISION—SUBTRACTION

Find each quotient by subtraction.

1. $24 \div 6 = \underline{\quad 4 \quad}$

$$\begin{array}{r} 24 \\ - 6 \\ \hline 18 \\ - 6 \\ \hline 12 \\ - 6 \\ \hline 6 \\ - 6 \\ \hline 0 \end{array}$$

2. $6 \div 2 = \underline{\quad \quad \quad}$

3. $28 \div 7 = \underline{\quad \quad \quad}$

4. $27 \div 9 = \underline{\quad \quad \quad}$

5. $45 \div 9 = \underline{\quad \quad \quad}$

6. $42 \div 7 = \underline{\quad \quad \quad}$

133 ■ MULTIPLICATION TABLE

Study the table at the right.
It shows $1 \times 1 = 1$

Show $2 \times 2 = 4$

Show $3 \times 3 = 9$

Show $4 \times 4 = 16$

\times	0	1	2	3	4
0					
1		1			
2					
3					
4					

Show

1. 1×0

1×1

1×2

1×3

1×4

\times	0	1	2	3	4
0					
1	0				
2					
3					
4					

Show

2. 0×1

1×1

2×1

3×1

4×1

\times	0	1	2	3	4
0		0			
1					
2					
3					
4					

Show

3. 4×0

3×1

2×2

1×3

0×4

\times	0	1	2	3	4
0					
1					
2					
3					
4	0				

Show

4. 0×4

1×3

2×2

3×1

4×0

\times	0	1	2	3	4
0					0
1					
2					
3					
4					

5. $3 \times 9 = \underline{\quad 27 \quad}$

6. $4 \times 8 = \underline{\quad \quad \quad}$

7. $7 \times 5 = \underline{\quad \quad \quad}$

8. $8 \times 6 = \underline{\quad \quad \quad}$

9. $9 \times 7 = \underline{\quad \quad \quad}$

10. $6 \times 5 = \underline{\quad \quad \quad}$

134, 136, 138 ■ ZERO, ONE, TWO

Complete.

1. $5 \times 0 = 0$, so $0 \div 5 = \underline{0}$

2. $3 \times 0 = 0$, so $0 \div 3 = \underline{\quad}$

3. $67 \times 0 = 0$, so $0 \div 67 = \underline{\quad}$

4. $1 \times 5 = 5$, so $5 \div 5 = \underline{\quad}$

5. $6 \times 1 = 6$, so $6 \div 1 = \underline{\quad}$

6. Complete.

\times	0	1	2	3	4	5	6	7	8	9
0	0					0				
1			2							
2									16	

Make true sentences.

7. $3 \times 1 = \underline{3}$

8. $2 \times 8 = \underline{\quad}$

9. $1 \times 7 = \underline{\quad}$

10. $1 \times 6 = \underline{\quad}$

11. $1 \times 2 = \underline{\quad}$

12. $8 \times 0 = \underline{\quad}$

13. $4 \times 0 = \underline{\quad}$

14. $2 \times 9 = \underline{\quad}$

15. $1 \times 3 = \underline{\quad}$

16. $2 \times 5 = \underline{\quad}$

17. $1 \times 9 = \underline{\quad}$

18. $2 \times 2 = \underline{\quad}$

19. $6 \div 2 = \underline{\quad}$

20. $0 \div 7 = \underline{\quad}$

21. $12 \div 6 = \underline{\quad}$

22. $9 \div 1 = \underline{\quad}$

23. $14 \div 2 = \underline{\quad}$

24. $0 \div 4 = \underline{\quad}$

25. $4 \div 2 = \underline{\quad}$

26. $18 \div 2 = \underline{\quad}$

27. $2 \div 1 = \underline{\quad}$

28. $8 \div 8 = \underline{\quad}$

29. $1 \div 1 = \underline{\quad}$

30. $9 \div 9 = \underline{\quad}$

139 ■ ODD AND EVEN NUMBERS

Tell which are odd and which are even.

1. 64 even

2. 39 _____

3. 45 _____

4. 64 _____

5. 22 _____

6. 33 _____

7. 27 _____

8. 992 _____

9. 174 _____

10. 749 _____

List 6 even numbers.

11. 24

12. _____

13. _____

14. _____

15. _____

16. _____

List 6 odd numbers.

17. 31

18. _____

19. _____

20. _____

21. _____

22. _____

Make true sentences. Tell which are even and which are odd.

23. $3 \times 2 =$ 6 even

24. $5 \times 3 =$ 15 odd

$3 \times 4 =$ _____

$5 \times 5 =$ _____

$3 \times 6 =$ _____

$5 \times 7 =$ _____

$3 \times 8 =$ _____

$5 \times 9 =$ _____

$3 \times 3 =$ _____

$5 \times 2 =$ _____

$3 \times 5 =$ _____

$5 \times 4 =$ _____

$3 \times 7 =$ _____

$5 \times 6 =$ _____

$3 \times 9 =$ _____

$5 \times 8 =$ _____

140 ■ THREE

Make true sentences.

1. $3 \times 5 = \underline{15}$

2. $4 \times 3 = \underline{\quad\quad}$

3. $1 \times 3 = \underline{\quad\quad}$

4. $2 \times 3 = \underline{\quad\quad}$

5. $3 \times 0 = \underline{\quad\quad}$

6. $7 \times 3 = \underline{\quad\quad}$

7. $24 \div 3 = \underline{\quad\quad}$

8. $18 \div 6 = \underline{\quad\quad}$

9. $15 \div 3 = \underline{\quad\quad}$

10. $3 \div 3 = \underline{\quad\quad}$

11. $27 \div 9 = \underline{\quad\quad}$

12. $21 \div 3 = \underline{\quad\quad}$

Complete each table by finding the rules.

13.

Input	Output
3	9
5	15
	27
	24
6	
	21

14.

Input	Output
12	4
21	7
	1
	0
	2
18	

Solve these problems.

15. There are 2 boots in a pair. How many boots are there in 3 pairs?

Answer _____

16. There are 24 balls. Three balls fit in a box. How many boxes are needed to put the balls away?

Answer _____

Work Space

[illegible]

2. $5 \times 9 = \underline{45}$

3. $4 \times 7 =$ _____

4. $4 \times 9 =$ _____

5. $4 \times 4 =$ _____

6. $6 \times 5 =$ _____

7. $5 \times 1 =$ _____

8. $5 \times 5 =$ _____

9. $4 \times 6 =$ _____

10. $5 \times 0 =$ _____

11. $4 \times 8 =$ _____

12. $5 \times 7 =$ _____

13. $5 \times 4 =$ _____

14. $30 \div 6 =$ _____

15. $8 \div 2 =$ _____

16. $40 \div 5 =$ _____

17. $24 \div 4 =$ _____

18. $25 \div 5 =$ _____

19. $32 \div 4 =$ _____

20. $20 \div 5 =$ _____

21. $12 \div 3 =$ _____

22. $35 \div 5 =$ _____

23. $15 \div 3 =$ _____

24. $45 \div 5 =$ _____

25. $36 \div 9 =$ _____

Work Space

HOLT SCHOOL MATHEMATICS 242

26. Ms. Rosen wanted to buy 4 new tires and a spare for each of her taxis. She had 5 taxis. How many tires did she need to buy?

Answer _____

27. Mr. Sands wants 5 teams. There are 30 children. How many children will be on a team?

Answer _____

144 ■ MULTIPLICATION-ADDITION

Study these arrays. Then complete Exercises 1 and 2.

```

X X X   X X
X X X   X X
X X X   X X
X X X   X X

```

1. 4×5

$4 \times (\underline{3} + \underline{\quad})$

$(\underline{4} \times 3) + (\underline{4} \times \underline{2})$

$12 + \underline{\quad}$

```

X X X X X
X X X X X
X X X X X
X X X X X

```

2. 4×5

$4 \times (\underline{\quad} + \underline{\quad})$

$(4 \times \underline{\quad}) + (\underline{\quad} \times 1)$

$\underline{\quad} + \underline{\quad}$

Complete.

3. $5 \times (3 + 2) = (5 \times 3) + (5 \times \underline{2})$

4. $8 \times (4 + 3) = (8 \times \underline{\quad}) + (\underline{\quad} \times 3)$

5. 3×9

$3 \times (5 + 4)$

$(\underline{\quad} \times 5) + (3 \times \underline{\quad})$

$15 + \underline{\quad}$

6. 7×9

$7 \times (6 + 3)$

$(7 \times 6) + (\underline{\quad} \times \underline{\quad})$

$\underline{\quad} + \underline{\quad}$

7. 7×8

$7 \times (5 + \underline{\quad})$

$(7 \times \underline{\quad}) + (\underline{\quad} \times 3)$

$\underline{\quad} + \underline{\quad}$

8. 5×5

$\underline{\quad} \times (\underline{\quad} + 1)$

$(5 \times \underline{\quad}) + (\underline{\quad} \times 1)$

$\underline{\quad} + \underline{\quad}$

146 ■ SIX, SEVEN, EIGHT

1. Complete.

×	0	1	2	3	4	5	6	7	8	9
6			12							
7									56	
8					32					

Make true sentences.

2. $7 \times 6 = \underline{42}$

3. $8 \times 8 = \underline{\hspace{2cm}}$

4. $6 \times 4 = \underline{\hspace{2cm}}$

5. $6 \times 0 = \underline{\hspace{2cm}}$

6. $7 \times 0 = \underline{\hspace{2cm}}$

7. $6 \times 8 = \underline{\hspace{2cm}}$

8. $6 \times 6 = \underline{\hspace{2cm}}$

9. $6 \div 6 = \underline{\hspace{2cm}}$

10. $42 \div 6 = \underline{\hspace{2cm}}$

11. $7 \div 1 = \underline{\hspace{2cm}}$

12. $56 \div 7 = \underline{\hspace{2cm}}$

13. $8 \div 8 = \underline{\hspace{2cm}}$

Complete. Use the multiplication-addition property.

14. 5×8

$5 \times (\underline{\hspace{2cm}} + 1)$

$(5 \times \underline{\hspace{2cm}}) + (5 \times \underline{\hspace{2cm}})$

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}}$

15. 7×4

$\underline{\hspace{2cm}} \times (3 + \underline{\hspace{2cm}})$

$(\underline{\hspace{2cm}} \times 3) + (7 \times \underline{\hspace{2cm}})$

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}}$

16. 8×7

$8 \times (\underline{\hspace{2cm}} + 3)$

$(8 \times \underline{\hspace{2cm}}) + (8 \times \underline{\hspace{2cm}})$

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}}$

17. 5×6

$5 \times (\underline{\hspace{2cm}} + \underline{\hspace{2cm}})$

$(5 \times \underline{\hspace{2cm}}) + (5 \times \underline{\hspace{2cm}})$

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}}$

148 ■ NINE

1. Complete.

×	0	1	2	3	4	5	6	7	8	9
9	0						54			

Make true sentences.

2. $9 \times 7 = \underline{63}$

3. $9 \times 3 = \underline{\hspace{2cm}}$

4. $9 \times 8 = \underline{\hspace{2cm}}$

5. $9 \times 0 = \underline{\hspace{2cm}}$

6. $9 \times 6 = \underline{\hspace{2cm}}$

7. $9 \times 2 = \underline{\hspace{2cm}}$

8. $54 \div 9 = \underline{\hspace{2cm}}$

9. $18 \div 9 = \underline{\hspace{2cm}}$

10. $27 \div 3 = \underline{\hspace{2cm}}$

11. $45 \div 5 = \underline{\hspace{2cm}}$

12. $63 \div 9 = \underline{\hspace{2cm}}$

13. $81 \div 9 = \underline{\hspace{2cm}}$

Complete. Use the multiplication-addition property.

14. 9×9

$9 \times (6 + \underline{3})$

$(\underline{9} \times 6) + (9 \times \underline{\hspace{1cm}})$

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}}$

15. 9×4

$9 \times (\underline{\hspace{1cm}} + 1)$

$(9 \times \underline{\hspace{1cm}}) + (9 \times \underline{\hspace{1cm}})$

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}}$

16. 5×9

$5 \times (\underline{\hspace{1cm}} + 1)$

$(5 \times \underline{\hspace{1cm}}) + (5 \times \underline{\hspace{1cm}})$

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}}$

17. 8×9

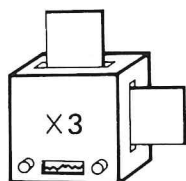
$8 \times (\underline{\hspace{1cm}} + \underline{\hspace{1cm}})$

$(8 \times \underline{\hspace{1cm}}) + (8 \times \underline{\hspace{1cm}})$

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

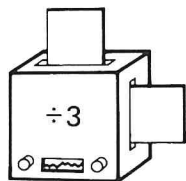
$\underline{\hspace{2cm}}$

1. Study this machine. Then complete the table.



<i>Input</i>	<i>Output</i>
5	15
3	
	30
9	

2. Study this machine. Then complete the table.



<i>Input</i>	<i>Output</i>
27	9
15	
	3
18	

Multiply each number by 4. Then divide the product by 4.

3. 3 $3 \times 4 = 12$ $12 \div 4 = 3$

4. 7 _____ _____

5. 5 _____ _____

Divide each number by 6. Then multiply the quotient by 6.

6. 30 $30 \div 6 = 5$ $5 \times 6 = 30$

7. 48 _____ _____

8. 42 _____ _____

155 ■ WRITING MINI-PROBLEMS

Circle the letter of the mini-problem that fits the sentence.

1. $3 \times 6 = \square$

- a.** 3 boys.
6 books each.
How many books in all?

- b.** 6 books.
3 boys.
How many books each?

2. $18 \div 9 = \triangle$

- a.** 18 cupcakes.
9 eaten.
How many left?

- b.** 18 girls.
9 girls on a team.
How many teams?

3. $63 - 57 = \triangle$

- a.** Dina, 63 marbles.
Sam, 57 marbles.
How many more has Dina?

- b.** Dina, 63¢ saved.
Sam, 57¢ saved.
How much saved in all?

Write a mini-problem for each. Do not solve.

4. $5 + 6 = \square$ _____ *5 cars.*

_____ *6 trucks.*

_____ *How many in all?*

5. $4 \times 5 = \triangle$ _____

6. $15 \div 3 = \triangle$ _____

158 ■ MULTIPLES: 10 · 100 · 1,000

Complete.

1. $5 \times 10 = \underline{\quad 50 \quad}$

$5 \times 100 = \underline{\hspace{2cm}}$

$5 \times 1,000 = \underline{\hspace{2cm}}$

3. $6 \times 10 = \underline{\hspace{2cm}}$

5. $17 \times 10 = \underline{\hspace{2cm}}$

7. $288 \times 10 = \underline{\hspace{2cm}}$

9. $899 \times 10 = \underline{\hspace{2cm}}$

2. $7 \times 10 = \underline{\hspace{2cm}}$

$7 \times 100 = \underline{\hspace{2cm}}$

$7 \times 1,000 = \underline{\hspace{2cm}}$

4. $8 \times 10 = \underline{\hspace{2cm}}$

6. $19 \times 100 = \underline{\hspace{2cm}}$

8. $246 \times 1,000 = \underline{\hspace{2cm}}$

10. $421 \times 1,000 = \underline{\hspace{2cm}}$

Complete.

11. $7,000 = \underline{\quad 7 \quad} \times 1,000$

13. $3,000 = 3 \times \underline{\hspace{2cm}}$

15. $8,000 = \underline{\hspace{2cm}} \times 1,000$

12. $80 = \underline{\hspace{2cm}} \times 10$

14. $500 = 5 \times \underline{\hspace{2cm}}$

16. $9,000 = \underline{\hspace{2cm}} \times 1,000$

Multiply.

17. $324 \times 1,000 = \underline{\quad 324,000 \quad}$

19. $836 \times 100 = \underline{\hspace{2cm}}$

21. $46 \times 1,000 = \underline{\hspace{2cm}}$

23. $100 \times 751 = \underline{\hspace{2cm}}$

25. $923 \times 100 = \underline{\hspace{2cm}}$

27. $76 \times 1,000 = \underline{\hspace{2cm}}$

18. $10 \times 74 = \underline{\hspace{2cm}}$

20. $246 \times 10 = \underline{\hspace{2cm}}$

22. $1,000 \times 138 = \underline{\hspace{2cm}}$

24. $872 \times 10 = \underline{\hspace{2cm}}$

26. $1,000 \times 468 = \underline{\hspace{2cm}}$

28. $100 \times 48 = \underline{\hspace{2cm}}$

162 ■ GROUPING PROPERTY

Complete.

1. $(4 \times 2) \times 5$

$\underline{\quad 8 \quad} \times 5$

$\underline{\quad 40 \quad}$

$4 \times (2 \times 5)$

$4 \times \underline{\quad 10 \quad}$

$\underline{\quad \quad \quad}$

2. $2 \times (3 \times 4)$

$2 \times \underline{\quad \quad \quad}$

$\underline{\quad \quad \quad}$

$(2 \times 3) \times 4$

$\underline{\quad \quad \quad} \times 4$

$\underline{\quad \quad \quad}$

3. $(5 \times 2) \times 3$

$\underline{\quad \quad \quad} \times \underline{\quad \quad \quad}$

$\underline{\quad 30 \quad}$

$5 \times (2 \times 3)$

$\underline{\quad \quad \quad} \times \underline{\quad \quad \quad}$

$\underline{\quad \quad \quad}$

Complete.

4. $6 \times 700 = 6 \times (7 \times \underline{\quad 100 \quad})$

$= (\underline{\quad \quad \quad} \times 7) \times 100$

$= \underline{\quad 42 \quad} \times \underline{\quad \quad \quad}$

$= \underline{\quad 4,200 \quad}$

5. $3 \times 200 = 3 \times (2 \times \underline{\quad \quad \quad})$

$= (\underline{\quad \quad \quad} \times \underline{\quad \quad \quad}) \times 100$

$= \underline{\quad \quad \quad} \times 100$

$= \underline{\quad \quad \quad}$

6. $7 \times 2,000 = 7 \times (\underline{\quad \quad \quad} \times 1,000)$

$= (\underline{\quad \quad \quad} \times \underline{\quad \quad \quad}) \times 1,000$

$= \underline{\quad \quad \quad} \times 1,000$

$= \underline{\quad \quad \quad}$

164 ■ MULTIPLES OF TEN

Complete.

$$1. 40 \times 80 = (4 \times \underline{10}) \times (8 \times \underline{10})$$

$$= (4 \times 8) \times (\underline{10} \times \underline{\quad})$$

$$= \underline{\quad} \times \underline{100}$$

$$= \underline{3,200}$$

$$2. 50 \times 30 = (5 \times \underline{\quad}) \times (3 \times \underline{\quad})$$

$$= (\underline{\quad} \times \underline{\quad}) \times (10 \times 10)$$

$$= \underline{\quad} \times \underline{\quad}$$

$$= \underline{\quad}$$

$$3. 70 \times 90 = (\underline{\quad} \times 10) \times (\underline{\quad} \times 10)$$

$$= (\underline{\quad} \times \underline{\quad}) \times (10 \times 10)$$

$$= \underline{\quad} \times \underline{\quad}$$

$$= \underline{\quad}$$

Multiply. Use short cut.

$$4. \begin{array}{r} 800 \\ \times 40 \\ \hline 32,000 \end{array}$$

$$5. \begin{array}{r} 40 \\ \times 10 \\ \hline \end{array}$$

$$6. \begin{array}{r} 50 \\ \times 30 \\ \hline \end{array}$$

$$7. \begin{array}{r} 600 \\ \times 20 \\ \hline \end{array}$$

$$8. \begin{array}{r} 900 \\ \times 60 \\ \hline \end{array}$$

$$9. \begin{array}{r} 800 \\ \times 90 \\ \hline \end{array}$$

166 ■ FINDING PRODUCTS

Complete.

$$\begin{aligned} 1. \quad 5 \times 432 &= 5 \times (400 + 30 + 2) \\ &= (5 \times \underline{400}) + (5 \times \underline{30}) + (5 \times \underline{\quad}) \\ &= \underline{2,000} + \underline{\quad} + \underline{10} \\ &= \underline{2,160} \end{aligned}$$

$$\begin{aligned} 2. \quad 3 \times 74 &= 3 \times (70 + 4) \\ &= (3 \times \underline{\quad}) + (3 \times \underline{\quad}) \\ &= \underline{\quad} + \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$\begin{aligned} 3. \quad 4 \times 253 &= 4 \times (200 + \underline{\quad} + \underline{\quad}) \\ &= (4 \times \underline{\quad}) + (4 \times \underline{\quad}) + (4 \times \underline{\quad}) \\ &= \underline{\quad} + \underline{\quad} + \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$\begin{aligned} 4. \quad 20 \times 325 &= 20 \times (\underline{\quad} + \underline{\quad} + \underline{\quad}) \\ &= (20 \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad}) \\ &= \underline{\quad} + \underline{\quad} + \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

168 ■ FORMS FOR MULTIPLYING

Complete.

$$\begin{array}{r} 1. \quad 22 \\ \times 3 \\ \hline 6 \end{array} (3 \times \underline{\quad 2 \quad})$$

$$\begin{array}{r} 60 \\ \times 3 \\ \hline 66 \end{array} (\underline{\quad 3 \quad} \times \underline{\quad 20 \quad})$$

$$\begin{array}{r} 3. \quad 71 \\ \times 6 \\ \hline 6 \end{array} (\underline{\quad \quad} \times \underline{\quad \quad})$$

$$\begin{array}{r} \underline{\quad \quad} \\ 426 \end{array} (6 \times \underline{\quad \quad})$$

$$\begin{array}{r} 2. \quad 63 \\ \times 3 \\ \hline 9 \end{array} (\underline{\quad \quad} \times \underline{\quad \quad})$$

$$\begin{array}{r} 180 \\ \times 3 \\ \hline 189 \end{array} (\underline{\quad \quad} \times \underline{\quad \quad})$$

$$\begin{array}{r} 4. \quad 82 \\ \times 4 \\ \hline \end{array} (\underline{\quad \quad} \times \underline{\quad \quad})$$

$$\begin{array}{r} \underline{\quad \quad} \\ 328 \end{array} (\underline{\quad \quad} \times \underline{\quad \quad})$$

Multiply. Use the short form.

$$\begin{array}{r} 5. \quad 324 \\ \times 2 \\ \hline 648 \end{array}$$

$$\begin{array}{r} 6. \quad 34 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 21 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 92 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 81 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 98 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 612 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 732 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 322 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 642 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 812 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad 721 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 17. \quad 831 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 18. \quad 411 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 19. \quad 621 \\ \times 4 \\ \hline \end{array}$$

172 ■ REGROUPING

Complete.

Expanded Form

Short Form

1.
$$\begin{array}{r} 43 \\ \times 5 \\ \hline 15 \end{array} (\underline{\quad}5 \times \underline{\quad}3 \underline{\quad})$$

$$\begin{array}{r} 200 \\ \times 5 \\ \hline 215 \end{array} (\underline{\quad}5 \times \underline{\quad}40 \underline{\quad})$$

2.
$$\begin{array}{r} 49 \\ \times 2 \\ \hline 18 \end{array} (\underline{\quad} \times \underline{\quad})$$

$$\begin{array}{r} 80 \\ \times 2 \\ \hline 98 \end{array} (\underline{\quad} \times \underline{\quad})$$

3.
$$\begin{array}{r} 96 \\ \times 3 \\ \hline \end{array}$$

$$\underline{\quad} (\underline{\quad} \times \underline{\quad})$$

$$\underline{\quad} (\underline{\quad} \times \underline{\quad})$$

$$\underline{\quad}$$

$$\begin{array}{r} 1 \\ 43 \\ \times 5 \\ \hline 215 \end{array}$$

$$\begin{array}{r} 49 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 96 \\ \times 3 \\ \hline \end{array}$$

Multiply. Use the short form.

4.
$$\begin{array}{r} 2 \\ 76 \\ \times 4 \\ \hline 304 \end{array}$$

5.
$$\begin{array}{r} 27 \\ \times 3 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 29 \\ \times 4 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 34 \\ \times 4 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 64 \\ \times 6 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 98 \\ \times 7 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 36 \\ \times 3 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 87 \\ \times 6 \\ \hline \end{array}$$

174 ■ LARGER NUMBERS

Multiply. Use the short form.

$$\begin{array}{r} 1 \\ 1. \ 683 \\ \times 2 \\ \hline 1,366 \end{array}$$

$$\begin{array}{r} 2. \ 242 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \ 427 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \ 973 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \ 372 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \ 2,493 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \ 2,073 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \ 4,009 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \ 5,071 \\ \times 6 \\ \hline \end{array}$$

Solve these problems.

Work Space

10. 425 people attended each performance of the school play. There were 3 performances. How many people attended in all?

Answer _____

11. Andrea lives 216 miles away from her grandmother. To visit her grandmother and to return home, how many miles must she travel in all?

Answer _____

12. Each row in the baseball park has 209 seats. How many people will be sitting in 8 rows if all the seats are taken?

Answer _____

176 ■ MORE REGROUPING

Multiply. Use the short form.

$$\begin{array}{r} 4 \quad 2 \quad 1 \\ 1. \quad 2,743 \\ \times 6 \\ \hline 16,458 \end{array}$$

$$\begin{array}{r} 2. \quad 245 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 956 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 4,527 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 2,487 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 8,530 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad \$75.09 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad \$75.49 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad \$80.90 \\ \times 4 \\ \hline \end{array}$$

Solve these problems.

Work Space

- 10.** It costs \$3.95 for one ticket to the circus.
Mrs. Werner has 4 children. How much will it cost her to buy circus tickets for all of her children?

Answer _____

- 11.** Gym classes are attended by 679 children at Sunset School. How many gym shoes are needed for all?

Answer _____

- 12.** It cost \$15.74 to go by train from Riverdale to Maywood. How much is a round trip ticket?

Answer _____

$$\begin{array}{r} 1. \ 487 \\ \times 5 \\ \hline \end{array} \qquad \begin{array}{r} 500 \\ \times 5 \\ \hline 2,500 \end{array}$$

$$\begin{array}{r} 2. \quad 321 \\ \times 6 \\ \hline \end{array}$$

3. 217×4

4. 594×3

5. 850×7

6. 938×2

Work Space

7. 3 bags of carrots 90¢
8. 2 pounds of cherries
9. 1 carton of tomatoes
10. 4 apples
11. 2 pounds of pears

Apples	12¢ each
Carrots	27¢ bag
Tomatoes	29¢ carton
Cherries	43¢ pound
Pears	35¢ pound

- 12.** Mary has \$4.00. Does she have enough to buy the items listed above? _____

HOLT SCHOOL MATHEMATICS 242

Candy	Price per pound
Jelly Beans	50¢
Licorice	79¢

- 13.** Kojo bought 3 pounds of jelly beans and 4 pounds of licorice. Estimate how much he spent in all.

Answer _____

182 ■ MULTIPLES OF TEN

Complete.

$$\begin{aligned}
 1. \quad 42 \times 30 &= 42 \times (3 \times \underline{10}) \\
 &= (42 \times \underline{\quad}) \times \underline{10} \\
 &= \underline{126} \times \underline{\quad} \\
 &= \underline{1,260}
 \end{aligned}$$

$$\begin{aligned}
 2. \quad 34 \times 20 &= 34 \times (\underline{\quad} \times \underline{\quad}) \\
 &= (34 \times \underline{\quad}) \times \underline{\quad} \\
 &= \underline{\quad} \times \underline{\quad} \\
 &= \underline{\quad}
 \end{aligned}$$

$$\begin{aligned}
 3. \quad 97 \times 40 &= \underline{\quad} \times (4 \times \underline{\quad}) \\
 &= (\underline{\quad} \times \underline{\quad}) \times \underline{\quad} \\
 &= \underline{\quad} \times \underline{\quad} \\
 &= \underline{\quad}
 \end{aligned}$$

Multiply.

$$\begin{array}{r}
 4 \\
 4. \quad 657 \\
 \times 60 \\
 \hline
 39,420
 \end{array}$$

$$\begin{array}{r}
 5. \quad 72 \\
 \times 30 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 6. \quad 39 \\
 \times 40 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 7. \quad 84 \\
 \times 40 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 8. \quad 743 \\
 \times 20 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 9. \quad 564 \\
 \times 40 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 10. \quad 759 \\
 \times 70 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 11. \quad 612 \\
 \times 60 \\
 \hline
 \end{array}$$

183 ■ TENS AND ONES

Complete.

Multiply
Ones

$$\begin{array}{r} 1. \quad 57 \\ \times 64 \\ \hline 228 \end{array}$$

Multiply
Tens

$$\begin{array}{r} 57 \\ \times 64 \\ \hline 228 \\ 3420 \end{array}$$

Add

$$\begin{array}{r} 57 \\ \times 64 \\ \hline 228 \\ 3420 \\ \hline 3,648 \end{array}$$

$$\begin{array}{r} 2. \quad 46 \\ \times 32 \\ \hline \end{array}$$

=====

$$\begin{array}{r} 3. \quad 76 \\ \times 53 \\ \hline \end{array}$$

=====

$$\begin{array}{r} 4. \quad 96 \\ \times 47 \\ \hline \end{array}$$

=====

Multiply.

$$\begin{array}{r} 5. \quad \$.98 \\ \times 64 \\ \hline 392 \\ 5880 \\ \hline \$62.72 \end{array}$$

$$\begin{array}{r} 6. \quad 62 \\ \times 34 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 57 \\ \times 46 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 38 \\ \times 22 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 78 \\ \times 55 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad \$.69 \\ \times 24 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad \$.98 \\ \times 57 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 65 \\ \times 16 \\ \hline \end{array}$$

185 ■ EXTENDING MULTIPLICATION

1. Complete.

Multiply
Ones

$$\begin{array}{r} 872 \\ \times 34 \\ \hline \end{array}$$

$$\underline{3488}$$

Multiply
Tens

$$\begin{array}{r} 872 \\ \times 34 \\ \hline \end{array}$$

$$\underline{3488}$$

Add

$$\begin{array}{r} 872 \\ \times 34 \\ \hline \end{array}$$

$$\underline{3488}$$

$$\underline{\underline{26160}}$$

Multiply.

$$\begin{array}{r} 2. \quad 769 \\ \times 74 \\ \hline 3076 \\ \hline 53830 \\ \hline 56,906 \end{array}$$

$$\begin{array}{r} 3. \quad 342 \\ \times 32 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 454 \\ \times 36 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad \$4.87 \\ \times 43 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 503 \\ \times 69 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 956 \\ \times 87 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 750 \\ \times 45 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad \$6.85 \\ \times 36 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 971 \\ \times 60 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad \$5.89 \\ \times 29 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad \$7.29 \\ \times 87 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 563 \\ \times 61 \\ \hline \end{array}$$

190 ■ DIVIDING TENS, HUNDREDS

Make true sentences, then show your divisions.

1. $700 \times 9 = \underline{\quad 6,300 \quad}$

$6,300 \div 9 = \underline{\quad 700 \quad}$

$$\begin{array}{r} 700 \\ 9 \overline{)6,300} \end{array}$$

2. $50 \times 5 = \underline{\quad \quad \quad}$

$250 \div 5 = \underline{\quad \quad \quad}$

3. $600 \times 6 = \underline{\quad \quad \quad}$

$3,600 \div 6 = \underline{\quad \quad \quad}$

4. $900 \times 9 = \underline{\quad \quad \quad}$

$8,100 \div 9 = \underline{\quad \quad \quad}$

Make true sentences. Complete the divisions.

5. $800 \div 4 = \underline{\quad 200 \quad}$

$$\begin{array}{r} 200 \\ 4 \overline{)800} \end{array}$$

6. $600 \div 3 = \underline{\quad \quad \quad}$

$$\begin{array}{r} 200 \\ 3 \overline{)600} \end{array}$$

7. $1,500 \div 5 = \underline{\quad \quad \quad}$

$$\begin{array}{r} 300 \\ 5 \overline{)1,500} \end{array}$$

8. $2,400 \div 6 = \underline{\quad \quad \quad}$

$$\begin{array}{r} 400 \\ 6 \overline{)2,400} \end{array}$$

Divide.

$$\begin{array}{r} 80 \\ 6 \overline{)480} \end{array}$$

$$\begin{array}{r} 30 \\ 3 \overline{)90} \end{array}$$

$$\begin{array}{r} 342 \\ 7 \overline{)280} \end{array}$$

$$\begin{array}{r} 280 \\ 8 \overline{)720} \end{array}$$

$$\begin{array}{r} 280 \\ 9 \overline{)720} \end{array}$$

$$\begin{array}{r} 420 \\ 6 \overline{)420} \end{array}$$

$$\begin{array}{r} 360 \\ 8 \overline{)560} \end{array}$$

$$\begin{array}{r} 180 \\ 4 \overline{)280} \end{array}$$

$$\begin{array}{r} 110 \\ 2 \overline{)200} \end{array}$$

$$\begin{array}{r} 400 \\ 3 \overline{)1,200} \end{array}$$

$$\begin{array}{r} 500 \\ 5 \overline{)3,500} \end{array}$$

$$\begin{array}{r} 300 \\ 9 \overline{)3,600} \end{array}$$

194 ■ STEPS IN DIVIDING

Complete.

$$\begin{array}{r}
 \overline{\overline{2}} \\
 10 \\
 20 \\
 1. \ 4 \overline{)128} \\
 \underline{80} \ (4 \times \underline{20}) \\
 48 \\
 \underline{40} \ (4 \times \underline{10}) \\
 8 \\
 \underline{8} \ (4 \times \underline{\quad}) \\
 0
 \end{array}$$

$$\begin{array}{r}
 \overline{\overline{7}} \\
 10 \\
 20 \\
 2. \ 6 \overline{)222} \\
 \underline{120} \ (6 \times \underline{\quad}) \\
 102 \\
 \underline{60} \ (6 \times \underline{\quad}) \\
 42 \\
 \underline{42} \ (\underline{\quad} \times \underline{\quad}) \\
 0
 \end{array}$$

Divide and check.

$$\begin{array}{r}
 36 \\
 \underline{6} \\
 30 \\
 3. \ 4 \overline{)144} \quad \begin{array}{r} 36 \\ \times 4 \\ \hline 144 \end{array} \\
 \underline{120} \\
 24 \\
 \underline{24} \\
 0
 \end{array}$$

$$4. \ 8 \overline{)296}$$

$$5. \ 8 \overline{)312}$$

$$6. \ 5 \overline{)345}$$

$$7. \ 9 \overline{)315}$$

$$8. \ 3 \overline{)213}$$

196 ■ MULTIPLES OF 10

1. Find the first 9 multiples of 10.

10, _____, _____, _____, _____, _____, _____, _____, _____

Circle the best multiple of 10 for the first estimate.

2. $265 \div 5$

40 50 60

3. $132 \div 6$

10 20 30

4. $396 \div 9$

40 50 60

5. $588 \div 7$

70 80 90

6. $315 \div 9$

20 30 40

7. $424 \div 8$

50 60 70

8. $294 \div 7$

20 30 40

9. $264 \div 3$

60 70 80

10. $352 \div 4$

70 80 90

11. $434 \div 7$

60 70 80

Find the best multiple of 10 for the first estimate.

12. $378 \div 6$ 60

13. $240 \div 5$ _____

14. $448 \div 7$ _____

15. $644 \div 7$ _____

Find the best multiple of 10 for the first estimate.

16.
$$\begin{array}{r} 90 \\ 3 \overline{)285} \end{array}$$

17. $4 \overline{)96}$

18. $8 \overline{)615}$

19. $6 \overline{)558}$

20. $5 \overline{)135}$

21. $8 \overline{)496}$

22. $7 \overline{)386}$

23. $9 \overline{)819}$

198 ■ DIVIDING TENS AND ONES

Complete.

$$\begin{array}{r} 49 \\ \hline \end{array}$$

$$\begin{array}{r} \hline \hline \end{array}$$

$$\begin{array}{r} \hline \hline \end{array}$$

$$\begin{array}{r} \hline \hline \end{array}$$

$$\begin{array}{r} 40 \\ \hline 1. 8 \overline{)392} \end{array}$$

$$\begin{array}{r} \hline 2. 5 \overline{)385} \end{array}$$

$$\begin{array}{r} 320 \\ \hline \end{array} \quad (\underline{\quad} 8 \times \underline{\quad} 40 \underline{\quad})$$

$$\begin{array}{r} \hline \hline \end{array} \quad (\underline{\quad} \times \underline{\quad})$$

$$\begin{array}{r} 72 \\ \hline \end{array}$$

$$\begin{array}{r} \hline \hline \end{array}$$

$$\begin{array}{r} 72 \\ \hline \end{array} \quad (\underline{\quad} \times \underline{\quad} 9 \underline{\quad})$$

$$\begin{array}{r} \hline \hline \end{array} \quad (\underline{\quad} \times \underline{\quad})$$

$$\begin{array}{r} 0 \\ \hline \end{array}$$

$$\begin{array}{r} \hline \hline \end{array}$$

Divide and check.

$$\begin{array}{r} 82 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 80 \\ \hline 3. 7 \overline{)574} \end{array} \quad \begin{array}{r} 82 \\ \times 7 \\ \hline 574 \end{array}$$

$$4. 8 \overline{)624}$$

$$5. 4 \overline{)272}$$

$$6. 6 \overline{)498}$$

$$7. 9 \overline{)666}$$

$$8. 5 \overline{)475}$$

200 ■ MULTIPLES OF 100

Find the best multiple of 100 for the first estimate.

$$1. \begin{array}{r} 700 \\ 8 \overline{) 5,936} \end{array}$$

$$2. \begin{array}{r} 3 \overline{) 957} \end{array}$$

$$3. \begin{array}{r} 6 \overline{) 4,976} \end{array}$$

$$4. \begin{array}{r} 9 \overline{) 8,577} \end{array}$$

$$5. \begin{array}{r} 8 \overline{) 6,496} \end{array}$$

$$6. \begin{array}{r} 7 \overline{) 3,997} \end{array}$$

Divide and check.

$$7. \begin{array}{r} 939 \\ 9 \overline{) 8,573} \\ \underline{900} \\ 300 \\ \underline{273} \\ 273 \\ \underline{210} \\ 63 \\ \underline{63} \\ 0 \end{array} \quad \begin{array}{r} 939 \\ \times 7 \\ \hline 6,573 \end{array}$$

$$8. \begin{array}{r} 6 \overline{) 5,742} \end{array}$$

$$9. \begin{array}{r} 2 \overline{) 864} \end{array}$$

$$10. \begin{array}{r} 3 \overline{) 1,443} \end{array}$$

$$11. \begin{array}{r} 8 \overline{) 5,392} \end{array}$$

$$12. \begin{array}{r} 5 \overline{) 3,405} \end{array}$$

202 ■ TWO-STEP PROBLEMS

Solve these problems.

Work Space

1. Jan earned \$2.50 on Friday, and \$1.75 on Saturday. She spent \$2.25. How much does she have left?

Step One $\$2.50 + \$1.75 = \$4.25$

Step Two \$4.25 - \$2.25 = \$2.00

Answer _____

2. Greg baked 3 dozen cookies. His family ate 19 cookies. How many cookies were left?

Step One _____

Step Two _____

Answer _____

3. There were 12 cars parked in the school lot. After school 3 more cars entered and 4 cars left. How many cars are there in the lot now?

Step One _____

Step Two _____

Answer _____

4. Tina earned \$3.25 a day helping her father. She spent 75 cents a day for lunch. How much did she have left at the end of 5 days of work and lunches?

Step One _____

Step Two _____

Answer _____

204 ■ REMAINDERS

1. Divide each of these numbers by 5.
5, 6, 7, 8, 9

Work Space

List all remainders. 0, _____, _____, _____, _____

2. What is the largest remainder
when dividing by 5? _____

Place a \checkmark after the divisions that have remainders too large.

$$3. \begin{array}{r} 78 \text{ r } 9 \\ 8 \overline{)633} \end{array} \quad \checkmark$$

$$4. \begin{array}{r} 9 \text{ r } 6 \\ 7 \overline{)69} \end{array} \quad \text{_____}$$

$$5. \begin{array}{r} 896 \text{ r } 7 \\ 4 \overline{)3,591} \end{array} \quad \text{_____}$$

$$6. \begin{array}{r} 69 \text{ r } 3 \\ 5 \overline{)348} \end{array} \quad \text{_____}$$

$$7. \begin{array}{r} 275 \text{ r } 12 \\ 9 \overline{)2,487} \end{array} \quad \text{_____}$$

$$8. \begin{array}{r} 614 \text{ r } 8 \\ 8 \overline{)4,920} \end{array} \quad \text{_____}$$

Divide.

$$9. \begin{array}{r} 90 \text{ r } 5 \\ 7 \overline{)635} \\ \underline{630} \\ 5 \end{array}$$

$$10. 9 \overline{)86}$$

$$11. 8 \overline{)75}$$

$$12. 6 \overline{)248}$$

$$13. 5 \overline{)418}$$

$$14. 7 \overline{)365}$$

$$15. 5 \overline{)4,562}$$

$$16. 7 \overline{)4,348}$$

$$17. 9 \overline{)6,666}$$

206 ■ MULTIPLES OF 10

Tell your first estimate. Do not complete.

$$1. \begin{array}{r} 40 \\ 20 \overline{) 856} \end{array}$$

$$2. 30 \overline{) 635}$$

$$3. 50 \overline{) 763}$$

$$4. 30 \overline{) 974}$$

$$5. 70 \overline{) 817}$$

$$6. 90 \overline{) 8,762}$$

$$7. 40 \overline{) 2,149}$$

$$8. 60 \overline{) 4,895}$$

$$9. 80 \overline{) 5,614}$$

Divide and check.

$$10. \begin{array}{r} 73 \text{ r } 24 \\ 40 \overline{) 2,944} \end{array}$$

$$\begin{array}{r} 73 \\ \times 40 \\ \hline 2920 \\ + 24 \\ \hline 2,944 \end{array}$$

$$11. 30 \overline{) 176}$$

$$12. 70 \overline{) 409}$$

$$13. 90 \overline{) 216}$$

$$14. 80 \overline{) 5,154}$$

$$15. 50 \overline{) 2,278}$$

Mr. Smith entered the tollway at Crimson.
How much does he pay if he leaves at these exits?

1. Elmwood 50¢
2. Landon
3. Madison
4. Exit 10
5. Exit 1
6. Exit 6
7. How much will it cost to go from Crimson to Westlake 5 times?

Answer _____

Going to work each day Mrs. Cortez enters the tollway at Crimson and exits at Summit.

8. What is her toll going to work?

Answer _____

9. How much does she pay in tolls for 5 days?

Answer _____

10. How much will she pay in a year? (Hint: 52 weeks in a year.)

Answer

Town	Exit	Toll
Westlake	10	.65
Elmwood	9	.50
Forrest	8	.30
Crimson	7	X
Upland	6	.20
Madison	5	.45
Clover	4	.60
Summit	3	.75
Landon	2	.90
Towers	1	1.10

210 ■ SHORT FORM FOR DIVISION

Complete.

$$\begin{array}{r}
 1. \quad \begin{array}{r} 36 \\ 4 \overline{) 145} \\ \underline{120} \\ 25 \\ \underline{24} \end{array} r \text{ ----} \\
 (4 \times \underline{30}) \\
 (4 \times \underline{6}) \\
 \text{----}
 \end{array}$$

$$\begin{array}{r}
 2. \quad \begin{array}{r} 85 \\ 6 \overline{) 512} \\ \underline{480} \\ 32 \\ \underline{30} \end{array} r \text{ ----} \\
 (6 \times \text{----}) \\
 (6 \times \text{----}) \\
 \text{----}
 \end{array}$$

$$\begin{array}{r}
 3. \quad \begin{array}{r} \text{----} \\ 4 \overline{) 2,107} \end{array} r \text{ ----} \\
 \text{----} (\text{----} \times \text{----}) \\
 \text{----} \\
 \text{----} (\text{----} \times \text{----}) \\
 \text{----} \\
 \text{----} (\text{----} \times \text{----}) \\
 \text{----}
 \end{array}$$

$$\begin{array}{r}
 4. \quad \begin{array}{r} \text{----} \\ 5 \overline{) 1,377} \end{array} r \text{ ----} \\
 \text{----} (\text{----} \times \text{----}) \\
 \text{----} \\
 \text{----} (\text{----} \times \text{----}) \\
 \text{----} \\
 \text{----} (\text{----} \times \text{----}) \\
 \text{----}
 \end{array}$$

Divide. Use the short form.

$$5. \quad \begin{array}{r} 55 \\ 5 \overline{) 279} \end{array} r 4$$

$$6. \quad 3 \overline{) 137}$$

$$7. \quad 5 \overline{) 324}$$

$$8. \quad 6 \overline{) 562}$$

$$9. \quad 9 \overline{) 7,845}$$

$$10. \quad 4 \overline{) 3,411}$$

212 ■ MULTIPLES OF 10

Complete.

$$\begin{array}{r}
 27 \text{ r } _____ \\
 1. \ 30 \overline{) 833} \\
 \underline{600} \ (30 \times \underline{20}) \\
 233 \\
 \underline{210} \ (30 \times \underline{7}) \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 85 \text{ r } _____ \\
 2. \ 60 \overline{) 5,139} \\
 \underline{4,800} \ (_____ \times _____) \\
 339 \\
 \underline{330} \ (_____ \times _____) \\
 \hline
 \end{array}$$

Divide. Use the short form.

$$3. \ 70 \overline{) 680} \quad 9 \text{ r } 50$$

$$4. \ 20 \overline{) 658}$$

$$5. \ 30 \overline{) 730}$$

$$6. \ 50 \overline{) 846}$$

$$7. \ 80 \overline{) 911}$$

$$8. \ 20 \overline{) 535}$$

$$9. \ 70 \overline{) 4,366}$$

$$10. \ 60 \overline{) 3,009}$$

$$11. \ 40 \overline{) 3,487}$$

$$12. \ 50 \overline{) 2,472}$$

$$13. \ 90 \overline{) 7,655}$$

$$14. \ 80 \overline{) 6,983}$$

214 ■ AVERAGES

Complete. Find the average.

1. 7, 3, 6, 4 7 + 3 + 6 + 4 = 20

20 ÷ 4 = _____

2. 7, 5, 9 _____ + _____ + _____ = _____

_____ ÷ _____ = _____

3. 10, 20, 40, 70 _____ + _____ + _____ + _____ = _____

_____ ÷ _____ = _____

Find the average.

4. 8, 5, 9, 2, 6 6

5. 7, 5, 6 _____

6. 20, 30, 70, 20, 40, 60 _____

7. 63, 72, 47, 29, 54 _____

8. 26, 28, 27, 25, 22, 28 _____

9. 92, 87, 73, 54, 69 _____

Solve this problem.

Work Space

10. Mrs. James drove the following distances: Sunday, 125; Monday, 248; Tuesday, 214; Wednesday, 173. What was the average distance for the four days?

Answer _____

216 ■ DOLLARS AND CENTS

Rename.

1. \$1.72 172 cents
2. \$.57 _____ cents
3. \$2.07 _____ cents
4. 79 cents _____
5. 68 cents _____
6. \$9.04 _____ cents

Divide. Think cents. Write money notations.

7. $5 \overline{) \$1.25}$ $5 \overline{) 125} \begin{array}{r} 25 \\ \underline{100} \\ 25 \\ \underline{25} \\ 0 \end{array}$ 25¢ or \$.25
8. $7 \overline{) \$6.37}$ _____
9. $4 \overline{) \$3.96}$ _____
10. $6 \overline{) \$2.46}$ _____
11. $3 \overline{) \$27}$ _____
12. $8 \overline{) \$5.76}$ _____

Solve these problems.

Work Space

- 13.** Merry-go-round rides are 3 for \$.60.
How much is it for one ride?

Answer _____

- 14.** Flashlights are on sale at 2 for \$1.98.
How much will one flashlight cost?

Answer _____

220 ■ FRACTIONS

Name the numerators.

1. $\frac{2}{6}$ ___2___

2. $\frac{1}{4}$ _____

3. $\frac{5}{7}$ _____

4. $\frac{3}{4}$ _____

Name the denominators.

5. $\frac{3}{4}$ ___4___

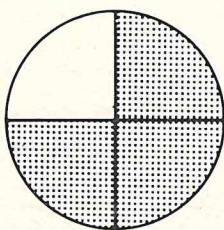
6. $\frac{8}{12}$ _____

7. $\frac{9}{10}$ _____

8. $\frac{5}{7}$ _____

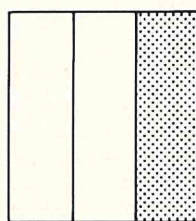
Write a fractional numeral to tell what part is shaded.

9.

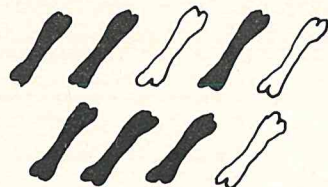


$$\frac{3}{4}$$

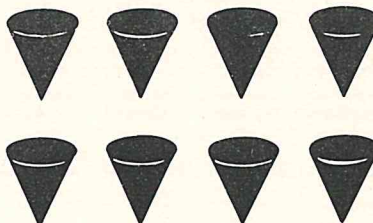
10.



11.



12.



Write fractional numerals.

13. 5 out of 6 $\frac{5}{6}$ _____

14. 8 out of 12 _____

15. 2 out of 3 _____

16. 1 out of 4 _____

17. 1 out of 6 _____

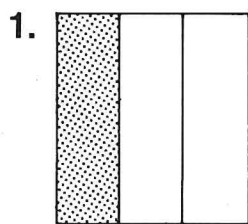
18. 4 out of 9 _____

19. 5 out of 11 _____

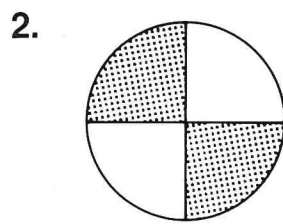
20. 7 out of 8 _____

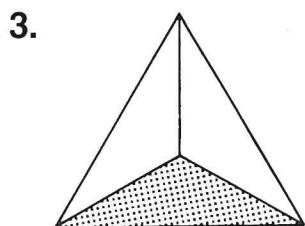
222 ■ PARTS OF A WHOLE

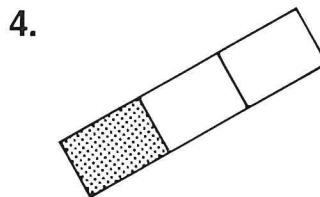
Place a \checkmark after each that shows $\frac{1}{3}$ of a whole shaded.

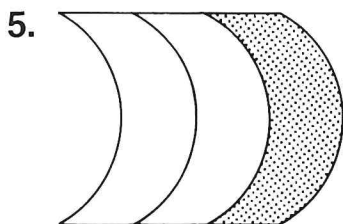


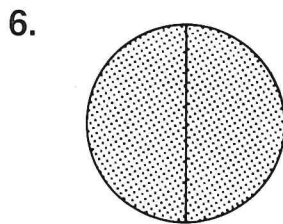
_____ \checkmark _____











Draw a picture to show each as a part of a whole.

7. $\frac{2}{4}$

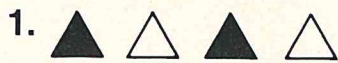
8. $\frac{2}{3}$

9. $\frac{6}{8}$

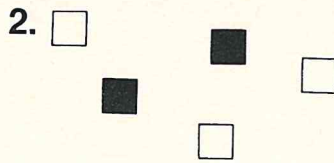
10. $\frac{5}{5}$

223, 225 ■ PARTS OF A SET

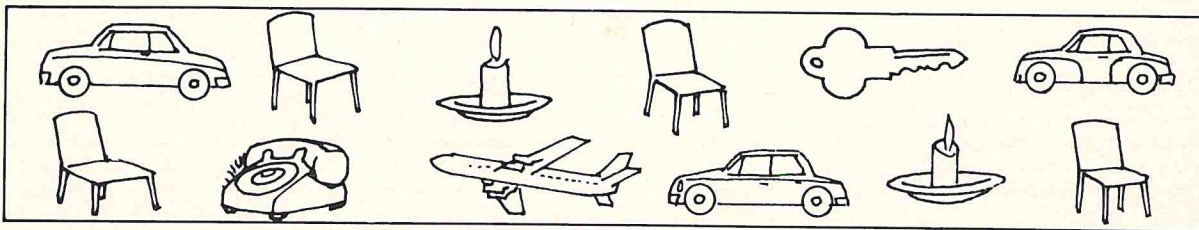
What part of each set is shaded?



$\frac{4}{7}$



Study this set.



4. How many members are in the set? _____

What part of the set is each?

5. Plane $\frac{1}{12}$

6. Chairs _____

7. Key _____

8. Candles _____

9. Telephone _____

10. Cars _____

Complete.

11. $\frac{1}{2}$ of 6 = 3

12. $\frac{1}{3}$ of 21 = _____

6 \div 2 = 3

_____ \div _____ = _____

Complete.

13. $\frac{1}{7}$ of 35 = 5

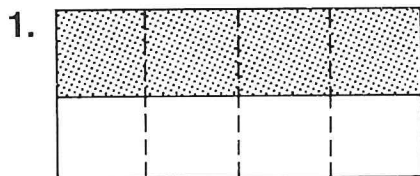
14. $\frac{1}{2}$ of 12 = _____

15. $\frac{1}{9}$ of 27 = _____

16. $\frac{1}{8}$ of 56 = _____

228 ■ EQUIVALENT NUMERALS

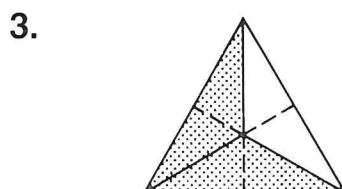
For each, write an equation showing two equivalent fractional numerals that tell what part is shaded.



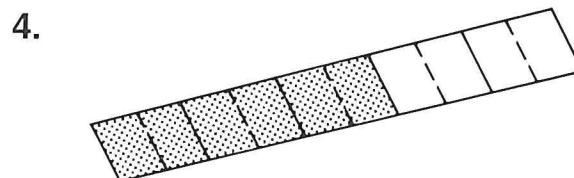
$$\frac{4}{8} = \frac{1}{2}$$



$$\frac{2}{4} = \frac{1}{2}$$

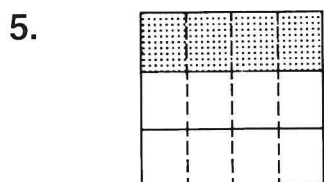


$$\frac{4}{6} = \frac{2}{3}$$

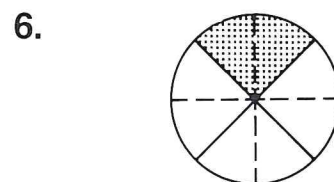


$$\frac{6}{10} = \frac{3}{5}$$

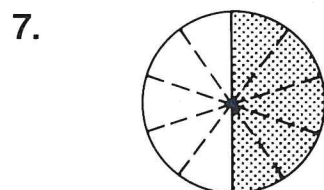
Circle the two equivalent fractional numerals that tell what part is shaded.



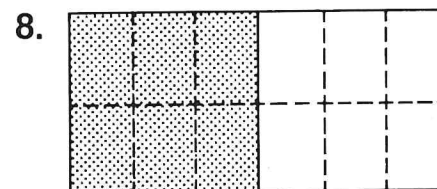
$\frac{4}{12}$ $\frac{2}{6}$ $\frac{1}{3}$



$\frac{1}{8}$ $\frac{2}{8}$ $\frac{1}{4}$



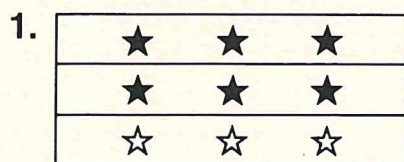
$\frac{5}{10}$ $\frac{1}{2}$ $\frac{3}{10}$



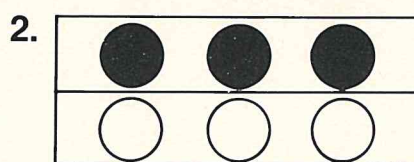
$\frac{1}{2}$ $\frac{8}{12}$ $\frac{6}{12}$

230 ■ USING SETS

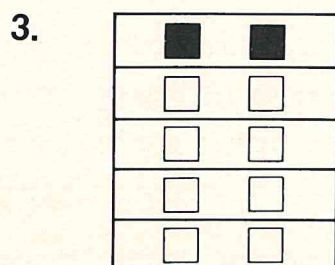
For each, write an equation showing two fractional numerals that tell what part of each set is shaded.



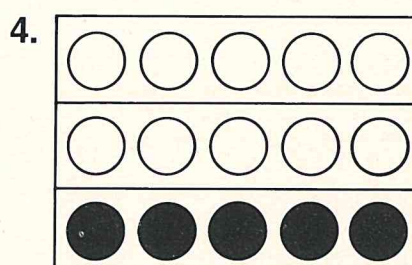
$$\frac{6}{9} = \frac{2}{3}$$



$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

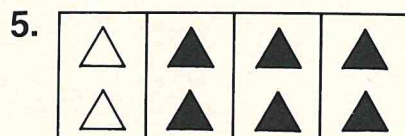


$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

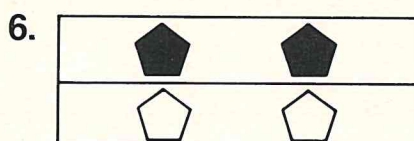


$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

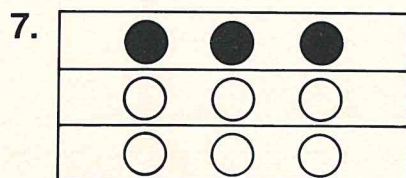
Circle the two fractional numerals that tell what part of each set is shaded.



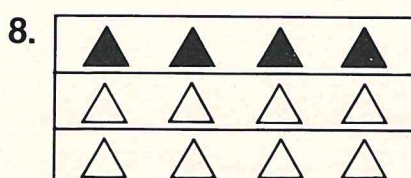
$\frac{6}{8}$, $\frac{2}{3}$, $\frac{3}{4}$, $\frac{1}{3}$



$\frac{1}{2}$, $\frac{1}{3}$, $\frac{2}{8}$, $\frac{2}{4}$

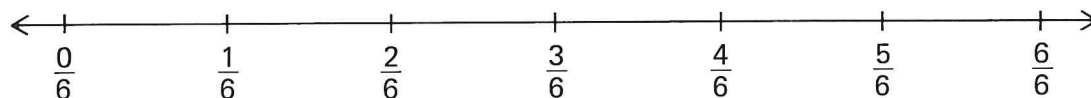
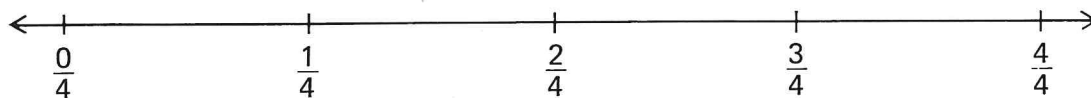
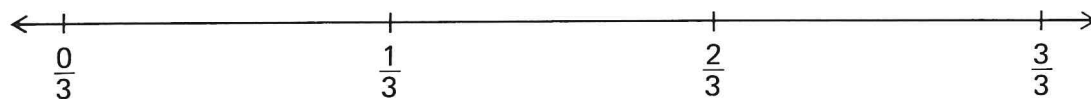
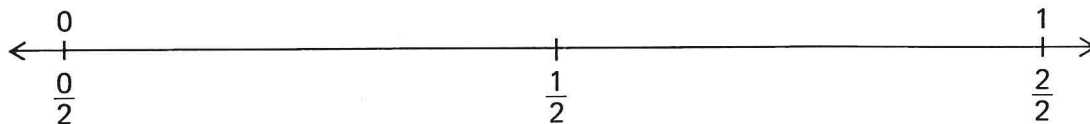


$\frac{2}{3}$, $\frac{1}{3}$, $\frac{6}{9}$, $\frac{3}{9}$



$\frac{1}{4}$, $\frac{2}{4}$, $\frac{1}{3}$, $\frac{4}{12}$

232, 235 ■ NUMBER LINE



Complete.

1. $\frac{2}{3} = \frac{\triangle}{6}$ ---4---

2. $\frac{1}{2} = \frac{\triangle}{4}$ -----

3. $\frac{2}{4} = \frac{\square}{6}$ -----

4. $\frac{3}{3} = \frac{\square}{2}$ -----

5. $\frac{1}{3} = \frac{2}{\square}$ -----

6. $\frac{4}{6} = \frac{\triangle}{3}$ -----

Compare. Use =, <, or >.

7. 1 ----- $\frac{6}{6}$

8. $\frac{2}{6}$ ----- $\frac{4}{6}$

9. $\frac{6}{6}$ ----- $\frac{1}{6}$

10. $\frac{2}{3}$ ----- $\frac{3}{3}$

11. 1 ----- $\frac{1}{3}$

12. $\frac{4}{4}$ ----- 1

13. $\frac{0}{4}$ ----- 0

14. $\frac{3}{3}$ ----- 1

15. $\frac{1}{6}$ ----- 1

True or false? Write T or F.

16. $\frac{2}{4} > \frac{2}{3}$ ---F---

17. $\frac{2}{6} < \frac{1}{2}$ -----

18. $\frac{1}{2} = \frac{3}{6}$ -----

19. $\frac{1}{6} > \frac{1}{3}$ -----

20. $\frac{1}{3} < \frac{4}{4}$ -----

21. $\frac{2}{3} = \frac{3}{4}$ -----

237 ■ CHOOSING OPERATIONS

Write $+$, $-$, \times , or \div to show which operation you should use to solve the problem. Do not solve.

Work Space

1. There are 15 children waiting to play basketball. Each team has 5 children. How many teams will there be?

Operation \div _____

2. John paid \$14.98 for a jacket and \$7.98 for boots. How much did he spend in all?

Operation _____

3. Matt spent \$14.67 for food in the supermarket. He gave the clerk a twenty dollar bill. How much change will he receive?

Operation _____

4. There are 17 girls in one Girl Scout troop. Each girl will plant 2 trees in Arbor Day. How many trees will they plant in all?

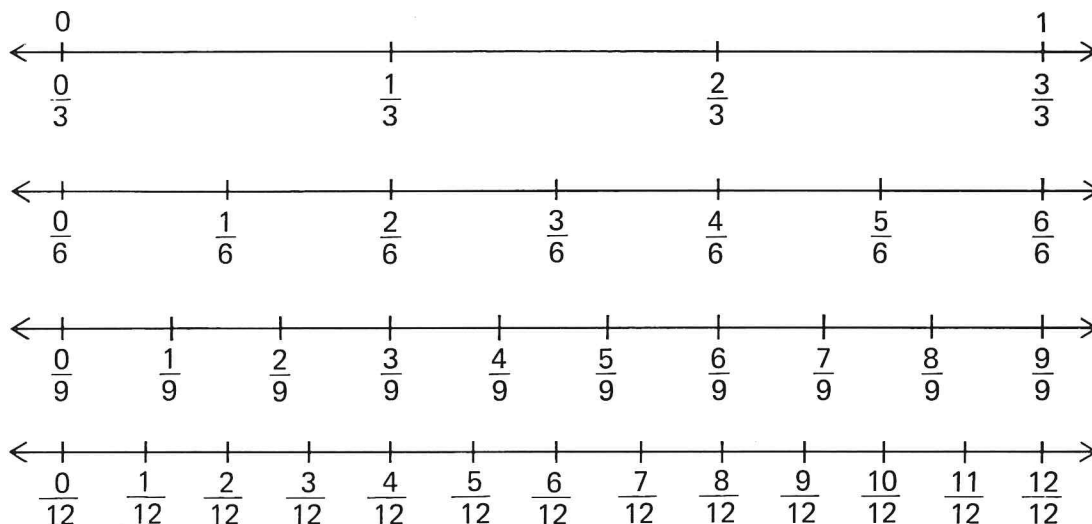
Operation _____

5. The children in Oakville want to start a baseball league. They need 8 teams to form a league. Each team has 9 players and 4 substitutes. How many children do they need to start a league? (Hint: two operations are needed.)

Operation 1 _____, then _____

238 ■ WRITING SETS

Study these number lines.



Some names for $\frac{1}{3}$ are: $\frac{1}{3}$, $\frac{2}{6}$, $\frac{3}{9}$, $\frac{4}{12}$.

1. The numerator increases by 1.
2. The denominator increases by 3.
3. Some names for $\frac{2}{3}$ are: $\frac{2}{3}$, $\frac{4}{6}$, , , .
4. The numerator increases by 2.
5. The denominator increases by 3.

Write the next two equivalent fractional numerals for each set.

6. $\left\{ \frac{1}{5}, \frac{2}{10}, \frac{3}{15}, \frac{4}{20}, \frac{5}{25}, \dots \right\}$
7. $\left\{ \frac{1}{4}, \frac{2}{8}, \frac{3}{12}, \text{-----}, \text{-----}, \dots \right\}$
8. $\left\{ \frac{3}{5}, \frac{6}{10}, \frac{9}{15}, \text{-----}, \text{-----}, \dots \right\}$
9. $\left\{ \frac{2}{7}, \frac{4}{14}, \frac{6}{21}, \text{-----}, \text{-----}, \dots \right\}$
10. $\left\{ \frac{1}{6}, \frac{2}{12}, \frac{3}{18}, \text{-----}, \text{-----}, \dots \right\}$
11. $\left\{ \frac{2}{4}, \frac{4}{8}, \frac{6}{12}, \text{-----}, \text{-----}, \dots \right\}$

240 ■ BUILDING SETS

$$\left\{ \frac{1}{8}, \frac{2}{16}, \frac{3}{24}, \frac{4}{32}, \frac{5}{40}, \frac{6}{48}, \dots \right\}$$

Complete.

1. $\frac{1 \times 1}{8 \times 1} = \frac{1}{8}$ _____

2. $\frac{1 \times 2}{8 \times 2} =$ _____

3. $\frac{1 \times 3}{8 \times 3} =$ _____

4. $\frac{1 \times 4}{8 \times 4} =$ _____

5. $\frac{1 \times 5}{8 \times 5} =$ _____

6. $\frac{1 \times 6}{8 \times 6} =$ _____

Build a set of equivalent fractional numerals for each.
List the first three names for each.

7. $\frac{3}{12}, \frac{3 \times 2}{12 \times 2} = \frac{6}{24}, \frac{3 \times 3}{12 \times 3} = \frac{9}{36}, \frac{3 \times 4}{12 \times 4} = \frac{12}{48}$ _____

8. $\frac{3}{9},$ _____, _____, _____

9. $\frac{5}{8},$ _____, _____, _____

Write the next three equivalent fractional numerals for each set.

10. $\left\{ \frac{5}{8}, \frac{10}{16}, \frac{15}{24}, \frac{20}{32}, \frac{25}{40}, \frac{30}{48}, \dots \right\}$

11. $\left\{ \frac{3}{9}, \frac{6}{18}, \frac{9}{27}, \dots \right\}$

12. $\left\{ \frac{3}{12}, \frac{6}{24}, \frac{9}{36}, \dots \right\}$

248 ■ ADDING FRACTIONS

Complete.

1. $\frac{2}{8} + \frac{4}{8} = \frac{2+4}{8}$

$$= \frac{6}{8}$$

2. $\frac{1}{5} + \frac{2}{5} = \frac{+}{5}$

$$= \frac{\quad}{\quad}$$

3. $\frac{5}{12} + \frac{6}{12} = \frac{+}{12}$

$$= \frac{\quad}{\quad}$$

4. $\frac{0}{9} + \frac{6}{9} = \frac{+}{9}$

$$= \frac{\quad}{\quad}$$

Add.

5. $\frac{2}{8} + \frac{4}{8} = \frac{6}{8}$

6. $\frac{2}{5} + \frac{1}{5} = \frac{\quad}{\quad}$

7. $\frac{5}{11} + \frac{2}{11} = \frac{\quad}{\quad}$

8. $\frac{4}{15} + \frac{5}{15} = \frac{\quad}{\quad}$

9. $\frac{1}{9} + \frac{3}{9} = \frac{\quad}{\quad}$

10. $\frac{3}{10} + \frac{4}{10} = \frac{\quad}{\quad}$

Add.

11.
$$\begin{array}{r} \frac{3}{8} \\ + \frac{2}{8} \\ \hline \frac{5}{8} \end{array}$$

12.
$$\begin{array}{r} \frac{2}{4} \\ + \frac{1}{4} \\ \hline \end{array}$$

13.
$$\begin{array}{r} \frac{7}{14} \\ + \frac{3}{14} \\ \hline \end{array}$$

14.
$$\begin{array}{r} \frac{6}{12} \\ + \frac{2}{12} \\ \hline \end{array}$$

15.
$$\begin{array}{r} \frac{9}{20} \\ + \frac{6}{20} \\ \hline \end{array}$$

16.
$$\begin{array}{r} \frac{2}{8} \\ + \frac{0}{8} \\ \hline \end{array}$$

17.
$$\begin{array}{r} \frac{5}{9} \\ + \frac{3}{9} \\ \hline \end{array}$$

18.
$$\begin{array}{r} \frac{1}{7} \\ + \frac{5}{7} \\ \hline \end{array}$$

250 ■ SUBTRACTING FRACTIONS

Complete.

$$1. \frac{7}{8} - \frac{2}{8} = \frac{7-2}{8}$$

$$= \frac{5}{8}$$

$$2. \frac{4}{6} - \frac{1}{6} = \frac{-}{6}$$

$$= \frac{-}{6}$$

$$3. \frac{11}{13} - \frac{3}{13} = \frac{-}{13}$$

$$= \frac{-}{13}$$

$$4. \frac{9}{9} - \frac{7}{9} = \frac{-}{9}$$

$$= \frac{-}{9}$$

Subtract.

$$5. \frac{13}{15} - \frac{4}{15} = \frac{9}{15}$$

$$6. \frac{5}{8} - \frac{2}{8} = \frac{-}{8}$$

$$7. \frac{9}{10} - \frac{1}{10} = \frac{-}{10}$$

$$8. \frac{19}{20} - \frac{3}{20} = \frac{-}{20}$$

$$9. \frac{7}{16} - \frac{0}{16} = \frac{-}{16}$$

$$10. \frac{8}{9} - \frac{8}{9} = \frac{-}{9}$$

Subtract.

$$11. \begin{array}{r} \frac{8}{9} \\ - \frac{2}{9} \\ \hline \frac{6}{9} \end{array}$$

$$12. \begin{array}{r} \frac{5}{10} \\ - \frac{2}{10} \\ \hline \end{array}$$

$$13. \begin{array}{r} \frac{11}{14} \\ - \frac{9}{14} \\ \hline \end{array}$$

$$14. \begin{array}{r} \frac{8}{12} \\ - \frac{4}{12} \\ \hline \end{array}$$

$$15. \begin{array}{r} \frac{7}{13} \\ - \frac{3}{13} \\ \hline \end{array}$$

$$16. \begin{array}{r} \frac{3}{9} \\ - \frac{3}{9} \\ \hline \end{array}$$

$$17. \begin{array}{r} \frac{14}{15} \\ - \frac{6}{15} \\ \hline \end{array}$$

$$18. \begin{array}{r} \frac{5}{7} \\ - \frac{2}{7} \\ \hline \end{array}$$

253 ■ COMPARING FRACTIONS

Compare. Use $>$, or $<$.

1. $\frac{3}{14}$ _____ $\frac{6}{14}$

2. $\frac{5}{6}$ _____ $\frac{4}{6}$

3. $\frac{1}{2}$ _____ $\frac{2}{2}$

4. $\frac{8}{16}$ _____ $\frac{9}{16}$

5. $\frac{6}{7}$ _____ $\frac{5}{7}$

6. $\frac{5}{7}$ _____ $\frac{6}{7}$

7. $\frac{7}{11}$ _____ $\frac{5}{11}$

8. $\frac{2}{10}$ _____ $\frac{5}{10}$

9. $\frac{2}{9}$ _____ $\frac{4}{9}$

10. $\frac{6}{8}$ _____ $\frac{5}{8}$

11. $\frac{2}{12}$ _____ $\frac{6}{12}$

12. $\frac{2}{3}$ _____ $\frac{1}{3}$

Find 3 fractions less than each.
Use like denominators.

13. $\frac{8}{9}$ _____, _____, _____

14. $\frac{6}{7}$ _____, _____, _____

15. $\frac{13}{15}$ _____, _____, _____

16. $\frac{9}{10}$ _____, _____, _____

Find 3 fractions greater than each.
Use like denominators.

17. $\frac{3}{7}$ _____, _____, _____

18. $\frac{4}{9}$ _____, _____, _____

19. $\frac{2}{12}$ _____, _____, _____

20. $\frac{6}{19}$ _____, _____, _____

Solve this problem.

Work Space

21. Carol used $\frac{1}{4}$ cup of sugar to make a cake. Jim used $\frac{3}{4}$ cup. Who used more sugar?

Answer _____

254 ■ DIFFERENT DENOMINATORS

Compare $\frac{2}{4}$ and $\frac{2}{3}$.

1. Find the first four names for $\frac{2}{4}$. $\frac{2}{4}$, $\frac{4}{8}$, $\frac{6}{12}$, $\frac{8}{16}$

2. Find the first four names for $\frac{2}{3}$. $\frac{2}{3}$, $\frac{4}{6}$, $\frac{6}{9}$, $\frac{8}{12}$

3. Find names with the same denominator. $\frac{6}{12}$, $\frac{8}{12}$

4. Make true using $>$, $<$, or $=$. $\frac{2}{4} < \frac{2}{3}$

Compare $\frac{1}{4}$ and $\frac{1}{6}$.

5. Find the first four names for $\frac{1}{4}$. _____, _____, _____, _____

6. Find the first four names for $\frac{1}{6}$. _____, _____, _____, _____

7. Find names with the same denominator. _____, _____

8. Make true using $>$, $<$, or $=$. $\frac{1}{4}$ _____ $\frac{1}{6}$

Compare. Use $>$, $<$, or $=$.

9. $\frac{3}{8} > \frac{2}{6}$

10. $\frac{1}{2}$ _____ $\frac{3}{5}$

11. $\frac{4}{5}$ _____ $\frac{5}{6}$

12. $\frac{1}{3}$ _____ $\frac{3}{9}$

13. $\frac{1}{4}$ _____ $\frac{2}{8}$

14. $\frac{1}{7}$ _____ $\frac{1}{8}$

15. $\frac{3}{3}$ _____ $\frac{5}{5}$

16. $\frac{3}{4}$ _____ $\frac{4}{5}$

256 ■ ADDITION

Complete.

$$\begin{array}{r} 1. \quad \frac{1}{4} = \frac{3}{12} \\ + \frac{3}{6} = \frac{6}{12} \\ \hline \frac{9}{12} \end{array}$$

$$\begin{array}{r} 2. \quad \frac{1}{5} = \frac{\quad}{15} \\ + \frac{2}{3} = \frac{\quad}{15} \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad \frac{1}{8} = \frac{\quad}{8} \\ + \frac{1}{4} = \frac{\quad}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad \frac{2}{5} = \frac{4}{\quad} \\ + \frac{4}{10} = \frac{4}{\quad} \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad \frac{1}{3} = \frac{3}{\quad} \\ + \frac{1}{9} = \frac{1}{\quad} \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad \frac{1}{2} = \frac{3}{\quad} \\ + \frac{1}{3} = \frac{2}{\quad} \\ \hline \end{array}$$

Add.

$$\begin{array}{r} 7. \quad \frac{1}{2} \\ + \frac{1}{3} \\ \hline \frac{5}{6} \end{array}$$

$$\begin{array}{r} 8. \quad \frac{2}{5} \\ + \frac{3}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad \frac{2}{9} \\ + \frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad \frac{1}{3} \\ + \frac{2}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad \frac{2}{4} \\ + \frac{1}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad \frac{1}{6} \\ + \frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad \frac{4}{6} \\ + \frac{1}{9} \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad \frac{3}{8} \\ + \frac{2}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad \frac{4}{15} \\ + \frac{3}{5} \\ \hline \end{array}$$

258 ■ SUBTRACTION

Complete.

$$1. \quad \frac{3}{4} = \frac{9}{12}$$

$$\begin{array}{r} -\frac{2}{3} = \frac{8}{12} \\ \hline \frac{1}{12} \end{array}$$

$$2. \quad \frac{3}{5} = \frac{\quad}{10}$$

$$\begin{array}{r} -\frac{1}{2} = \frac{\quad}{10} \\ \hline \end{array}$$

$$3. \quad \frac{5}{8} = \frac{\quad}{24}$$

$$\begin{array}{r} -\frac{1}{6} = \frac{\quad}{24} \\ \hline \end{array}$$

$$4. \quad \frac{7}{8} = \frac{7}{\quad}$$

$$\begin{array}{r} -\frac{1}{4} = \frac{2}{\quad} \\ \hline \quad \quad \end{array}$$

$$5. \quad \frac{6}{7} = \frac{24}{\quad}$$

$$\begin{array}{r} -\frac{1}{4} = \frac{7}{\quad} \\ \hline \quad \quad \end{array}$$

$$6. \quad \frac{4}{6} = \frac{4}{\quad}$$

$$\begin{array}{r} -\frac{1}{3} = \frac{2}{\quad} \\ \hline \quad \quad \end{array}$$

Subtract.

$$7. \quad \begin{array}{r} \frac{5}{8} \\ -\frac{2}{4} \\ \hline \frac{1}{8} \end{array}$$

$$8. \quad \begin{array}{r} \frac{7}{6} \\ -\frac{1}{3} \\ \hline \end{array}$$

$$9. \quad \begin{array}{r} \frac{7}{8} \\ -\frac{1}{2} \\ \hline \end{array}$$

$$10. \quad \begin{array}{r} \frac{5}{6} \\ -\frac{1}{4} \\ \hline \end{array}$$

$$11. \quad \begin{array}{r} \frac{5}{9} \\ -\frac{1}{3} \\ \hline \end{array}$$

$$12. \quad \begin{array}{r} \frac{7}{12} \\ -\frac{2}{6} \\ \hline \end{array}$$

$$13. \quad \begin{array}{r} \frac{8}{9} \\ -\frac{1}{6} \\ \hline \end{array}$$

$$14. \quad \begin{array}{r} \frac{9}{10} \\ -\frac{1}{5} \\ \hline \end{array}$$

$$15. \quad \begin{array}{r} \frac{1}{2} \\ -\frac{1}{3} \\ \hline \end{array}$$

262 ■ MIXED NUMERALS

Complete to find mixed numerals.

$$1. \frac{4}{3} = \frac{3}{3} + \frac{1}{3}$$

$$= 1 + \frac{1}{3}$$

$$=$$

$$2. \frac{5}{4} = \frac{\quad}{4} + \frac{\quad}{4}$$

$$= \frac{\quad}{4} + \frac{\quad}{4}$$

$$=$$

$$3. \frac{7}{6} = \frac{\quad}{6} + \frac{\quad}{6}$$

$$= \frac{\quad}{6} + \frac{\quad}{6}$$

$$=$$

$$4. \frac{9}{5} = \frac{\quad}{5} + \frac{\quad}{5}$$

$$= \frac{\quad}{5} + \frac{\quad}{5}$$

$$=$$

$$5. \frac{19}{10} = \frac{\quad}{10} + \frac{\quad}{10}$$

$$= \frac{\quad}{10} + \frac{\quad}{10}$$

$$=$$

$$6. \frac{14}{11} = \frac{\quad}{11} + \frac{\quad}{11}$$

$$= \frac{\quad}{11} + \frac{\quad}{11}$$

$$=$$

Write mixed numerals.

$$7. \frac{9}{7} = 1\frac{2}{7}$$

$$8. \frac{3}{2} = \frac{\quad}{2}$$

$$9. \frac{5}{3} = \frac{\quad}{3}$$

$$10. \frac{7}{4} = \frac{\quad}{4}$$

$$11. \frac{9}{8} = \frac{\quad}{8}$$

$$12. \frac{10}{7} = \frac{\quad}{7}$$

$$13. \frac{18}{10} = \frac{\quad}{10}$$

$$14. \frac{12}{7} = \frac{\quad}{7}$$

$$15. \frac{8}{6} = \frac{\quad}{6}$$

$$16. \frac{15}{9} = \frac{\quad}{9}$$

$$17. \frac{17}{10} = \frac{\quad}{10}$$

$$18. \frac{18}{15} = \frac{\quad}{15}$$

Solve this mini-problem. Use mixed numerals.

19. Left over marbles.

$\frac{2}{3}$ of one package.

$\frac{2}{3}$ of a second package.

How many packages are left?

Answer _____

Work Space

264 ■ SUMS 1 AND GREATER

Complete.

$$\begin{array}{r} 1. \quad \frac{5}{9} \\ + \frac{6}{9} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{11}{9} \\ \hline \end{array} = \frac{9}{9} + \frac{\quad}{\quad}$$

$$= 1\frac{2}{9}$$

$$\begin{array}{r} 2. \quad \frac{2}{6} \\ + \frac{5}{6} \\ \hline \end{array}$$

$$\frac{\quad}{\quad} = \frac{\quad}{\quad} + \frac{\quad}{\quad}$$

$$= \frac{\quad}{\quad}$$

Add. Give the sum as a mixed numeral.

$$\begin{array}{r} 3. \quad \frac{5}{11} \\ + \frac{7}{11} \\ \hline \frac{12}{11} = 1\frac{1}{11} \end{array}$$

$$\begin{array}{r} 4. \quad \frac{5}{10} \\ + \frac{8}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad \frac{6}{9} \\ + \frac{4}{9} \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad \frac{2}{3} \\ + \frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad \frac{8}{6} \\ + \frac{2}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad \frac{8}{7} \\ + \frac{2}{7} \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad \frac{6}{10} \\ + \frac{6}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad \frac{5}{9} \\ + \frac{9}{9} \\ \hline \end{array}$$

Solve this mini-problem.

11. Milk.

$\frac{6}{8}$ cup at breakfast.

$\frac{6}{8}$ cup at lunch.

How much in all?

Answer _____

Work Space

266 ■ MIXED NUMERALS

Add.

$$\begin{array}{r} 1. \quad 72\frac{3}{8} \\ + 20\frac{1}{8} \\ \hline 92\frac{4}{8} \end{array}$$

$$\begin{array}{r} 2. \quad 5\frac{1}{5} \\ + 2\frac{3}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 7\frac{3}{10} \\ + 4\frac{1}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 8\frac{2}{6} \\ + 6\frac{3}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 15\frac{5}{9} \\ + 4\frac{2}{9} \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 23\frac{4}{9} \\ + 11 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 31\frac{7}{11} \\ + 18\frac{3}{11} \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 16\frac{1}{8} \\ + 14\frac{6}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 25\frac{6}{12} \\ + 46\frac{5}{12} \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 23\frac{3}{7} \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 74\frac{6}{13} \\ + 98\frac{5}{13} \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 68\frac{1}{15} \\ + 45\frac{3}{15} \\ \hline \end{array}$$

Solve these problems.

Work Space

13. Jean is making a suit. She needs $2\frac{1}{8}$ yards of cloth for the jacket and $1\frac{5}{8}$ yards for the skirt. How much cloth does she need in all?

Answer _____

14. Carl rode his bicycle $3\frac{1}{4}$ miles to the lake one day and the same distance to get home. How far did he ride in all?

Answer _____

268 ■ MIXED NUMERALS

Subtract.

$$\begin{array}{r} 1. \quad 25\frac{3}{9} \\ - 9\frac{2}{9} \\ \hline 16\frac{1}{9} \end{array}$$

$$\begin{array}{r} 2. \quad 5\frac{6}{7} \\ - 3\frac{1}{7} \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 9\frac{7}{8} \\ - 3\frac{3}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 8\frac{3}{4} \\ - 6\frac{1}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 29\frac{5}{6} \\ - 4\frac{1}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 32\frac{10}{12} \\ - 9 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 52\frac{7}{11} \\ - 7\frac{2}{11} \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 36\frac{5}{9} \\ - 16\frac{2}{9} \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 27\frac{9}{12} \\ - 17\frac{5}{12} \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 37\frac{4}{9} \\ - 13 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 39\frac{5}{8} \\ - 27\frac{2}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 46\frac{2}{3} \\ - 28\frac{1}{3} \\ \hline \end{array}$$

Solve these problems.

Work Space

13. The Bates family lives $46\frac{7}{8}$ miles away from their

Uncle George. They have already traveled $6\frac{3}{8}$ miles on their way to visit him. How much farther do they have to go?

Answer _____

14. A butcher bought a side of beef that weighed $21\frac{3}{4}$

pounds. She sold $10\frac{1}{4}$ pounds to her customers.

How many pounds does she have left?

Answer _____

270 ■ PROBLEM SOLVING

Work Space

Solve these problems.

1. Jim jogged $2\frac{1}{3}$ miles on Saturday and $1\frac{1}{3}$ miles on Sunday. How far did he jog in all?

Answer _____

2. Carol bought $1\frac{4}{10}$ pounds of jelly beans and $2\frac{2}{10}$ pounds of chocolates. How much candy did she buy in all?

Answer _____

3. Susie is $4\frac{1}{3}$ feet tall. Jim is $5\frac{2}{3}$ feet tall. How much taller is Jim than Susie?

Answer _____

4. Mary needs $3\frac{7}{8}$ yards of ribbon to trim a dress. She has $2\frac{6}{8}$ yards. How much more does she need?

Answer _____

5. The Davis family hiked $8\frac{2}{10}$ miles on Monday and $4\frac{7}{10}$ miles on Tuesday. How far did they hike in all?

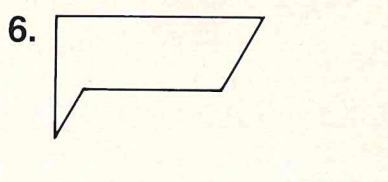
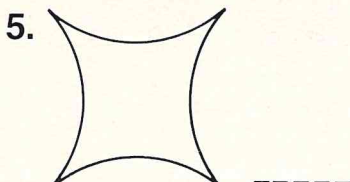
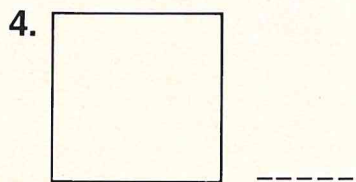
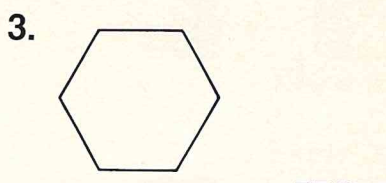
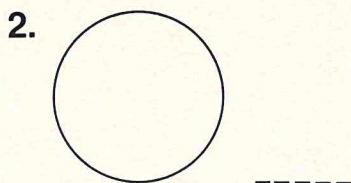
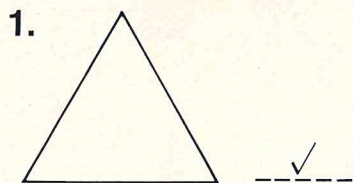
Answer _____

6. Tina rode her bicycle $15\frac{3}{9}$ miles. Mary rode $12\frac{2}{9}$ miles. How many more miles did Tina ride?

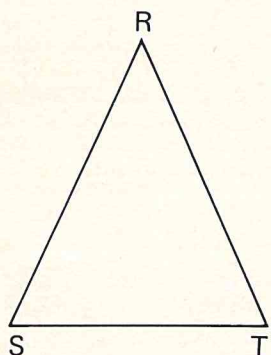
Answer _____

274, 276, 278 ■ POLYGONS

Place a \checkmark after the polygons.



Look at triangle RST .



Name its sides.

7. \overline{RT} _____

8. _____

9. _____

Name its angles.

10. $\angle RTS$ _____

11. _____

12. _____

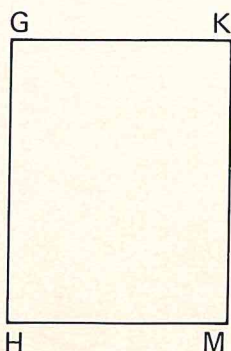
Name its vertices.

13. T _____

14. _____

15. _____

Look at rectangle $GKMH$.



Name the sides of rectangle $GKMH$.

16. \overline{GK} _____

17. _____

18. _____

19. _____

Name the pairs of opposite sides.

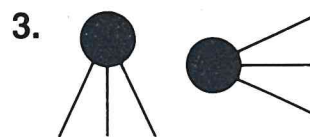
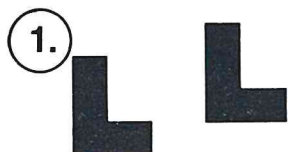
20. \overline{GK} and \overline{HM} _____

21. _____

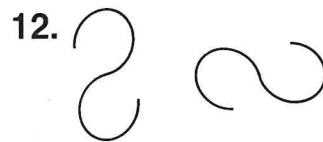
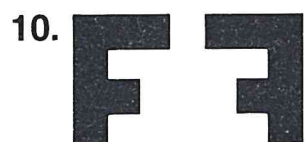
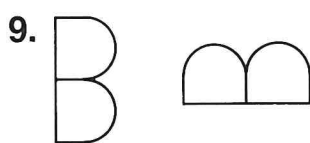
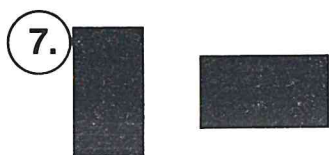
22. How many right angles are in rectangle

$GKMH$? _____

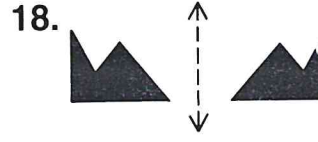
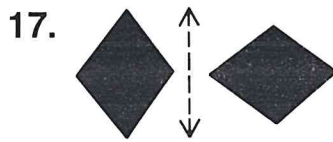
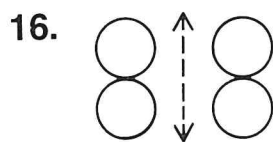
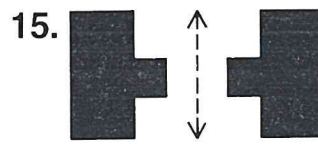
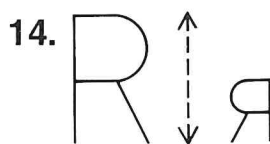
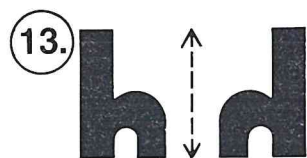
Circle the pairs which show slides.



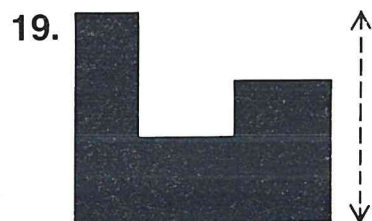
Circle the pairs which show turns.



Circle the pairs which show flips.

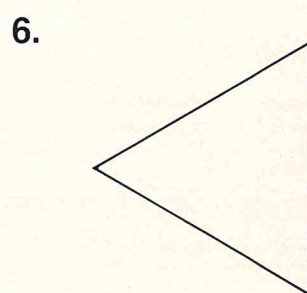
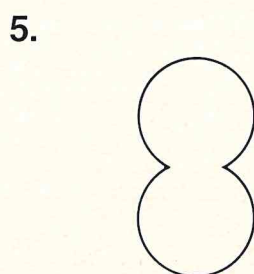
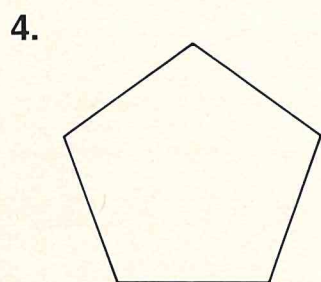
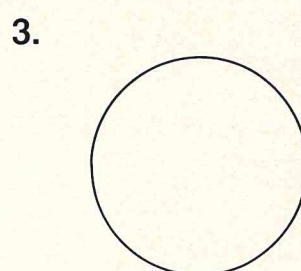
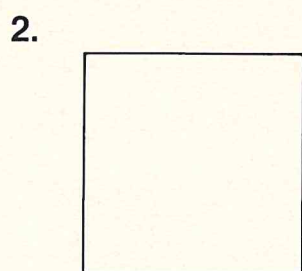
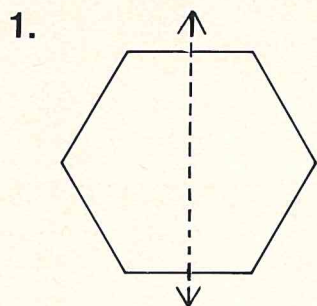


Draw a flip of the figure below.

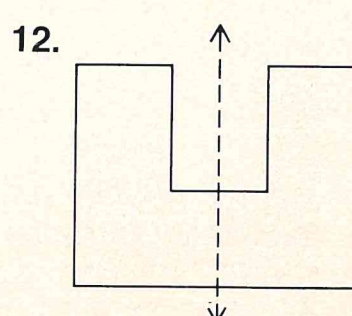
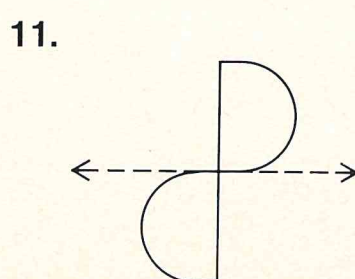
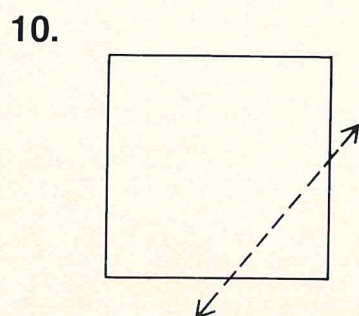
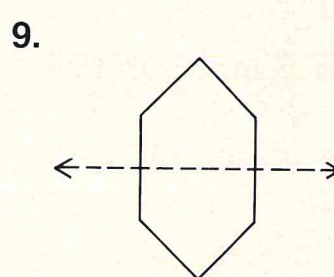
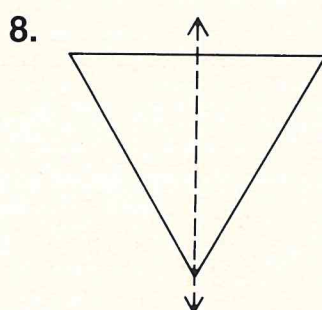
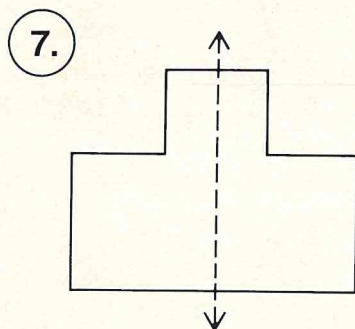


286 ■ SYMMETRY

Draw a line of symmetry through each.



Circle the figures that are symmetric.



288 ■ MONEY PROBLEMS

Work Space

Solve these problems.

1. Oranges are 10 for 79¢. How much will 1 orange cost?

Answer _____ 8¢ _____

2. Bananas are 14 cents a pound. How much will 3 pounds cost?

Answer _____

3. Al can buy 3 cans of corn for 49 cents. He can buy peas for 18 cents a can. Which is the better buy?

Answer _____

How much will Jane pay for these items?

Item	Price
4. 4 cans of beans	2 cans for 29¢ <u>58¢</u>
5. 1 bag of carrots	2 bags for 25¢ _____
6. 1 pound of hot dogs	89¢ per pound _____
7. 3 quarts of milk	31¢ a quart _____
8. What was Jane's total bill?	_____

9. Jane gave the clerk a \$10 bill. How much change did she get?

Answer _____

10. Apples are 60¢ a pound or 3 pounds for \$1.50. Which is the better buy?

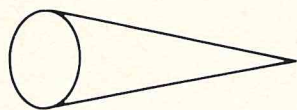
Answer _____

290, 292, 294 ■ SPACE OBJECTS

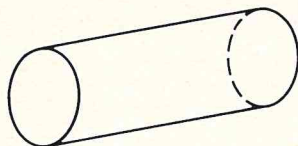
Match each figure with a name.

(cube, rectangular prism, cylinder, cone, sphere)

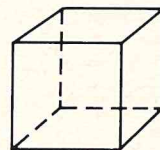
1.

*cone*

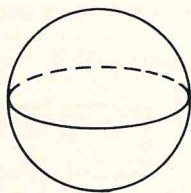
2.



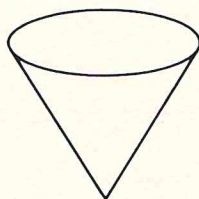
3.



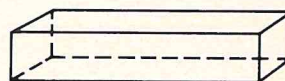
4.



5.



6.



Draw a figure which looks like:

7. a rectangular prism

8. a cylinder

9. a cone

10. a sphere

Complete.

Work Space

1. 1 foot = 12 inches
2. 1 yard = 3 feet
3. 1 yard = 36 inches
4. 1 mile = 5,280 feet
5. 1 mile = 1,760 yards
6. 3 feet = 36 inches
7. 9 feet = 3 yards
8. 5 yards = 45 feet
9. 4 yards = 36 feet
10. 3 miles = 15,840 feet
11. 8 feet = 96 inches
12. 10 feet = 120 inches
13. 2 miles = 3,520 yards
14. 5 feet = 60 inches
15. 3 yards = 108 inches
16. 12 feet = 4 yards

Solve this problem.

17. Jane's kite is 36 feet up in the air. Joe's kite is 10 yards up. Is Jane's kite, higher, lower, or at the same height as Joe's?

Answer _____

300, 302 ■ METRIC SYSTEM

Complete.

Work Space

1. 267 cm = 2 m 67 cm
2. 1 m = cm
3. 10 m = cm
4. 542 cm = m cm
5. 3 m 45 cm = cm
6. 1,000 cm = m
7. 604 cm = m cm
8. 7 m 6 cm = cm
9. 1 km = m
10. 6,000 m = km
11. 7,324 m = km m
12. 9 km 267 m = m
13. 4,062 m = km m
14. 6 km 23 m = m

Solve this problem.

15. Mary has a piece of ribbon 3 meters long. Joanne has a piece 200 centimeters long. Who has the longer piece of ribbon?

Answer _____

303 ■ ENGLISH—METRIC SYSTEMS

Place a ✓ after the one that is longer.

1. 1 inch ✓

1 centimeter

2. 1 yard

1 meter

3. 1 kilometer

1 mile

4. 5,280 feet

1 kilometer

5. 3 miles

3 kilometers

6. 97 inches

97 centimeters

How would you measure the objects in Exercises 7.–15.

For the English system use in., ft, mi.

For the metric system use cm, m, km.

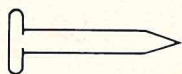
	English	Metric
7. A highway	<u>mi</u>	<u>km</u>
8. A candy bar	_____	_____
9. The height of your school	_____	_____
10. The depth of a swimming pool	_____	_____
11. A cookie box	_____	_____
12. A grasshopper	_____	_____
13. The distance to Mars	_____	_____
14. Your height	_____	_____
15. A pencil	_____	_____

304 ■ PARTS OF AN INCH

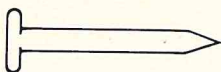
Measure.

To the nearest $\frac{1}{8}$ inch.

1. $\frac{7}{8}$ in. _____

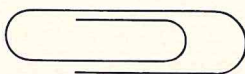


2. _____



To the nearest $\frac{1}{4}$ inch.

3. _____



To the nearest $\frac{1}{2}$ inch.

4. _____



To the nearest centimeter.

5. 2 cm



6. _____



Draw line segments these lengths.

7. $\frac{3}{8}$ inch

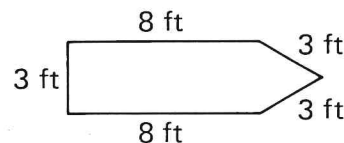
8. 4 centimeters

9. $\frac{1}{4}$ inch

306 ■ PERIMETER

Study the figure on the right.

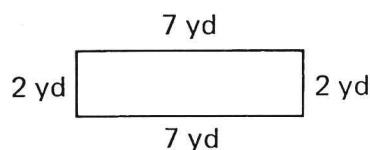
1. Find the perimeter by adding the length of the sides.



$$8 \text{ ft} + \underline{\quad 3 \quad} \text{ ft} + \underline{\quad 3 \quad} \text{ ft} + \underline{\quad 8 \quad} \text{ ft} + 3 \text{ ft} = \underline{\hspace{2cm}} \text{ ft}$$

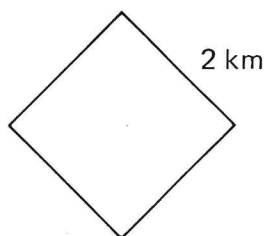
Find the perimeters.

2.

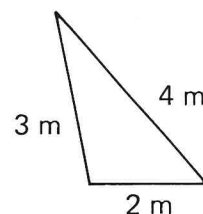


18 yd

3.



4.



Draw a picture to help you find these perimeters.

5. a triangle with each

side 1 in. long. _____

6. a square with each

side 2 cm long. _____

Solve this problem.

7. Mrs. Comstock wants to build a fence around her flower garden. The garden is a square, 6 feet on a side. How many feet of fence will she need?

Answer _____

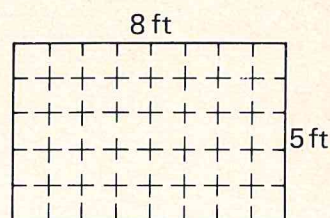
Work Space

308, 310 ■ AREA

Study the figure on the right.

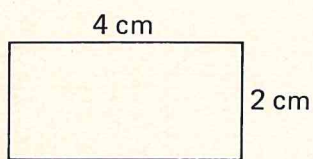
1. Find the area by multiplying the length by the width.

$$\underline{\quad 5 \quad} \times \underline{\quad 8 \quad} = \underline{\hspace{2cm}}$$



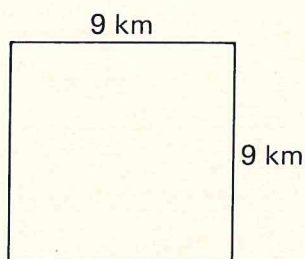
Find the areas.

2.

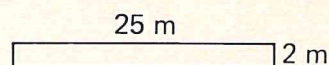


8 sq cm

3.



4.



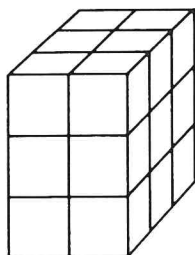
Draw a picture to help you find these areas. *Check children's drawings.*

5. length 2 in.; width 2 in.

6. length 3 cm; width 6 cm

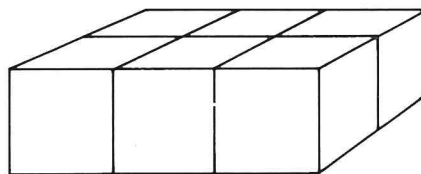
Find the volumes.

1.

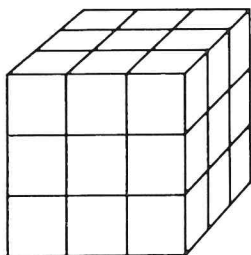


18 cubic units

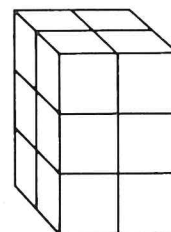
2.



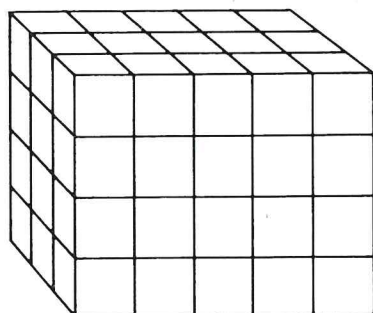
3.



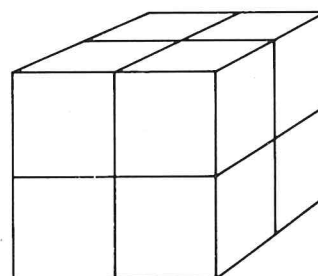
4.



5.



6.



7. To measure volume, we use _____ measure.

316 ■ MEASURING LIQUIDS

Complete.

Work Space

1. 1 pint = 2 cups
2. 1 quart = pints
3. 1 gallon = quarts
4. 1 gallon = pints
5. 1 quart = cups
6. 1 gallon = cups
7. 4 cups = pints
8. 8 quarts = gallons
9. $\frac{1}{2}$ gallon = quarts
10. 2 gallons = quarts
11. 2 quarts = pints
12. 5 gallons = quarts

Which is more?

13. 13 pints or 5 quarts 13 pints
14. 2 gallons or 7 quarts
15. 4 pints or 3 quarts
16. 3 cups or 1 pint
17. 3 gallons or 9 quarts

317, 319 ■ MEASURING WEIGHT

Complete.

1. 1 lb = 16 oz

2. 1 ton = 2000 lb

3. 3 lb = 48 oz

4. 2 tons = 4000 lb

5. 3 tons = 6000 lb

6. 32 oz = 2 lb

7. 29 oz = 1 lb 17 oz

8. 25 oz = 1 lb 9 oz

9. 18 oz = 1 lb 10 oz

10. 5 lb = 80 oz

Add.

11.
$$\begin{array}{r} 2 \text{ kilograms} \\ + 11 \text{ kilograms} \\ \hline 13 \text{ kilograms} \end{array}$$

12.
$$\begin{array}{r} 2 \text{ lb } 5 \text{ oz} \\ + 7 \text{ lb } 3 \text{ oz} \\ \hline \end{array}$$

13.
$$\begin{array}{r} 14 \text{ kilograms} \\ + 5 \text{ kilograms} \\ \hline \end{array}$$

14.
$$\begin{array}{r} 14 \text{ lb } 11 \text{ oz} \\ + 23 \text{ lb } 4 \text{ oz} \\ \hline \end{array}$$

15.
$$\begin{array}{r} 6 \text{ lb } 15 \text{ oz} \\ + 31 \text{ lb} \\ \hline \end{array}$$

16.
$$\begin{array}{r} 12 \text{ lb } 6 \text{ oz} \\ + 6 \text{ lb } 7 \text{ oz} \\ \hline \end{array}$$

17.
$$\begin{array}{r} 4 \text{ kilograms} \\ + 15 \text{ kilograms} \\ \hline \end{array}$$

18.
$$\begin{array}{r} 31 \text{ kilograms} \\ + 7 \text{ kilograms} \\ \hline \end{array}$$

19.
$$\begin{array}{r} 8 \text{ lb } 4 \text{ oz} \\ + 7 \text{ lb } 9 \text{ oz} \\ \hline \end{array}$$

Solve these problems.

Work Space

20. Joe bought 2 kilograms of pears. Meg bought 4 kilograms of pears. How much did they buy in all?

Answer _____

21. Sue weighs 30 kilograms. Jake weighs 42 kilograms. How much more does Jake weigh?

Answer _____

320, 322 ■ TEMPERATURE

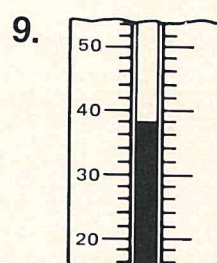
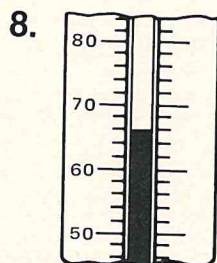
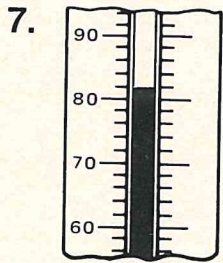
Complete.

1. Water freezes at 32 °F 2. Water boils at _____ °F
 3. Water freezes at _____ °C 4. Water boils at _____ °C

What is the difference between the boiling and the freezing temperature on:

5. the Celsius scale? _____ 6. the Fahrenheit scale? _____

What is the temperature?



10. Complete.

Temperature Before	Change	Temperature After
73°F	rises 12°	85°F
92°F	rises 7°	
	rises 10°	36°F
70°F	falls 8°	
29°F		24°F

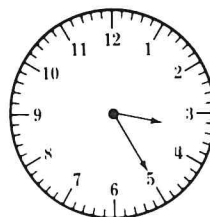
11. Temperature: Was 6°C. Rose 9°. What is it now? _____
 12. Temperature: Was 7°C. Fell 3°. What is it now? _____

324, 326 ■ TIME

Study the clockface at the right.

1. The time is 3:25.

This is 25 minutes after _____.



Give these times another way.

2. 7:30 half past 7

3. quarter past 6 _____

4. 3:05 _____ minutes after _____

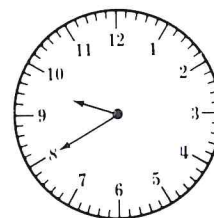
5. 10 minutes to 9 _____

Study the clockface on the right.

6. What time does the clock show? 9:40

7. What time was it 1 hour and 10 minutes before the time shown? _____

8. What time will it be 1 hour and 22 minutes after the time shown? _____



What time will it be 4 hours after each?

9. 11:00 am 3:00 pm

10. 7:35 am _____

11. 5:00 pm _____

12. 10:27 pm _____

13. 6:15 am _____

14. 11:20 pm _____

What time was it 5 hours before each?

15. 2:00 pm 9:00 am

16. 7:45 pm _____

17. 1:30 am _____

18. 3:15 am _____

19. 6:50 pm _____

20. 4:10 am _____

332 ■ ORDERED PAIRS

This is a seating chart. Each student has a code.

Seat 4	Stephen		Robert	Kathleen
Seat 3	Tor	<i>Jim</i>	Sonja	Akua
Seat 2		Matthew		
Seat 1			Karen	
	Row 1	Row 2	Row 3	Row 4

Give the codes for these children.
(Hint: Give the row, then the seat.)

1. Stephen (1, 4)

2. Tor _____

3. Matthew _____

4. Robert _____

5. Sonja _____

6. Karen _____

7. Kathleen _____

8. Akua _____

Complete the seating chart by using the code for each child.

9. Jim (2, 3) 10. Ellen (4, 1) 11. Barbara (1, 2) 12. Debbie (2, 1)

13. Donna (3, 2) 14. Carlos (4, 2) 15. Maria (1, 1) 16. Brian (2, 4)

Name the students with these codes.

17. (4, 3) Akua

18. (2, 4) _____

19. (3, 2) _____

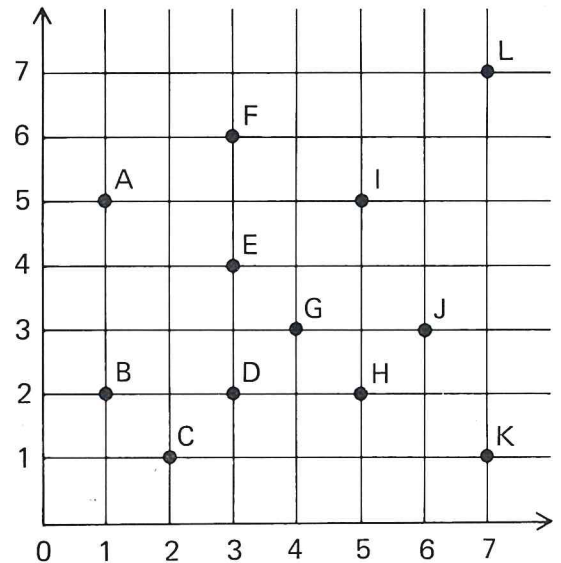
20. (1, 1) _____

21. (3, 4) _____

22. (4, 1) _____

334 ■ GRAPHING ORDERED PAIRS

Use the graph at the right for Exercises 1.–12.



Give the ordered pair for each.

1. D $(3, 2)$

2. C _____

3. B _____

4. L _____

5. F _____

6. G _____

Which letters have these ordered pairs?

7. $(1, 5)$ A

8. $(3, 4)$ _____

9. $(7, 1)$ _____

10. $(6, 3)$ _____

11. $(5, 5)$ _____

12. $(5, 2)$ _____

Graph these ordered pairs.

13. A $(5, 5)$

14. B $(3, 2)$

15. C $(7, 1)$

16. D $(7, 7)$

17. E $(2, 6)$

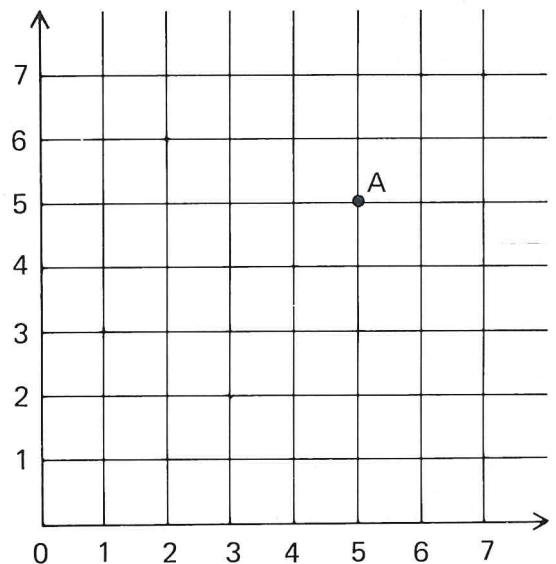
18. F $(4, 4)$

19. G $(1, 3)$

20. H $(6, 7)$




























21. R $(5, 3)$


22. J $(0, 4)$



336, 338 ■ PICTOGRAPHS

NEWSPAPERS DELIVERED LAST YEAR

Name	Number of Newspapers
Jay	         
Dick	      
Betty	         

Each  represents 10 newspapers

1. Who delivered the most newspapers? Betty

2. Who delivered the fewest? _____

How many newspapers did each child deliver last year?

3. Jay 85

4. Dick 70

5. Betty 90

6. How many newspapers were delivered in all? 245

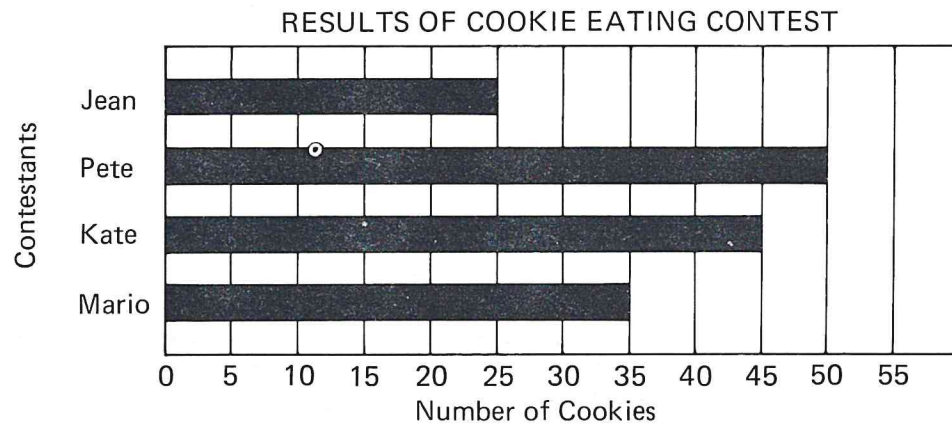
7. Draw a pictograph to show these facts.

Choose a picture symbol. Let it represent 10 children.

SCHOOL POPULATION	
Grade	Number of Children
1	40
2	35
3	40
4	45
5	50
6	60

SCHOOL POPULATION	
Grade	Number of Children

340, 342 ■ BAR GRAPHS



1. How many contestants were there? 4
2. Who won the contest?
3. Who came in second?
4. Who came in third?
5. Who finished last?

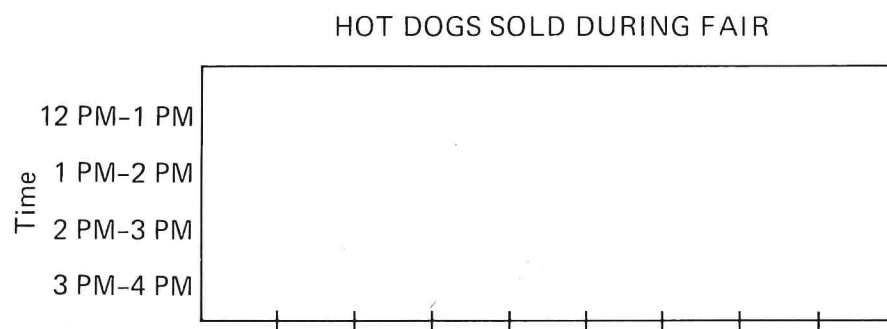
How many cookies did each child eat?

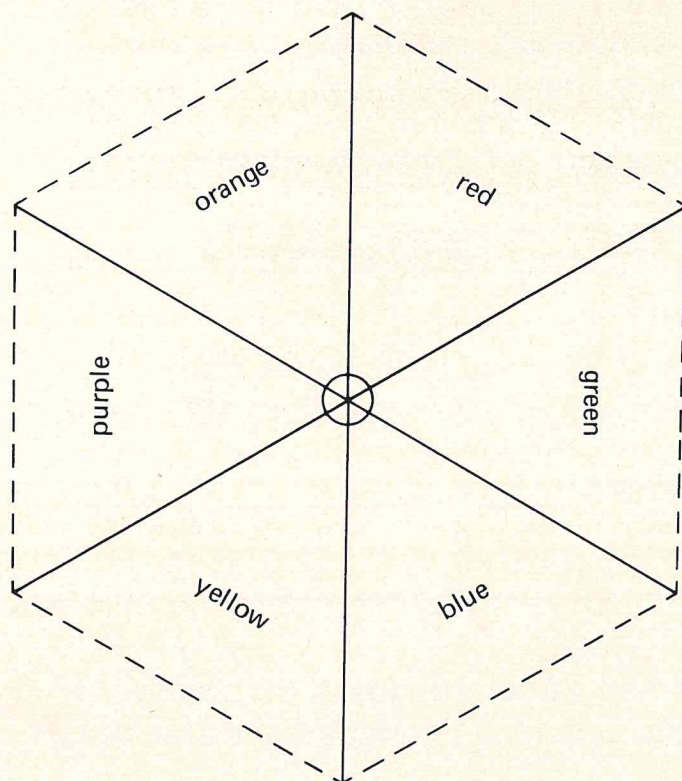
6. Jean 25
7. Pete
8. Kate
9. Mario

10. Use this information to complete the bar graph below.

- a. Put in the scale at the bottom.
Use units of 5.
- b. Label the bottom of the graph.
- c. Put in the bars.

HOT DOGS SOLD DURING FAIR	
Time	Number Sold
12:00 – 1:00	40
1:00 – 2:00	30
2:00 – 3:00	25
3:00 – 4:00	15



346, 348 ■ PROBABILITY

1. Make the spinner above. Follow these steps.
 - a. Trace.
 - b. Color each part.
 - c. Paste on cardboard. Cut it out. Cut on dotted lines.
 - d. Insert pencil at center.
 - e. Push halfway through. Spin on eraser.
2. Spin it 50 times. Record the color of the side where it stops. List your results like this:

Color	Tally
Red	III
Green	
Blue	
Yellow	
Purple	
Orange	

351 ■ PROBLEM SOLVING

Work Space

Write number sentences for these problems. Solve.

1. A farmer raised 300 bushels of wheat, 75 bushels of corn, and 600 bushels of soybeans. How many bushels of food did he raise in all?

Number sentence $300 + 75 + 600 = \triangle$ Answer *975 bushels*

2. A farmer picked 25 bushels of apples from 1 tree. How many bushels would he get from 100 trees?

Number Sentence _____

Answer _____

3. Mrs. Hughes has 1,000 oranges. If 50 oranges fit in each carton, how many cartons does she need?

Number Sentence _____

Answer _____

4. Apples sold for \$2.75 a bushel last year. This year apples are selling for \$3.29 a bushel. How much more must you pay for a bushel this year?

Number Sentence _____

Answer _____

5. Mr. Burns has 1,897 ears of corn. He is putting 10 ears in each bag. When he is finished, how many full bags of corn will he have?

Number Sentence _____

Answer _____

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Holt, Rinehart and Winston, Inc.
New York, Toronto, London, Sydney

